

LUDWIG

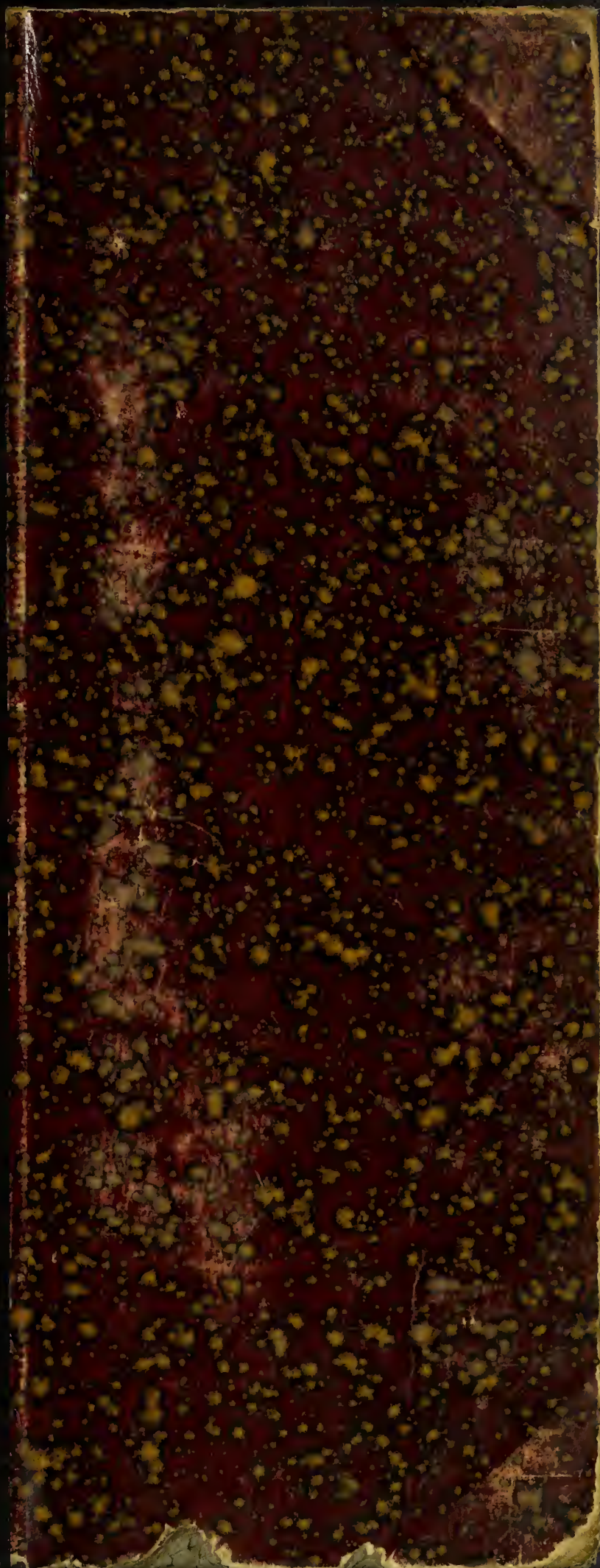
A Proposed Civic Improvement  
Plan for Minneapolis and Saint Paul

Architecture

M. S.

1912

UNIV. OF  
ILLINOIS  
LIBRARY







THE UNIVERSITY

OF ILLINOIS

LIBRARY

1912  
L26











A PROPOSED CIVIC IMPROVEMENT PLAN FOR  
MINNEAPOLIS AND SAINT PAUL

BY

EDWARD ROY LUDWIG

Bachelor of Science, University of Illinois, 1911

---

THESIS

Submitted in Partial Fulfillment of the Requirements for the

Degree of

MASTER OF SCIENCE

IN

ARCHITECTURE

IN

THE GRADUATE SCHOOL

OF THE

UNIVERSITY OF ILLINOIS

1912



1312  
L95



1912  
196

UNIVERSITY OF ILLINOIS  
THE GRADUATE SCHOOL

JUNE 1st, 1962.

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

EDWARD ROY LUDWIG

ENTITLED A PROPOSED CIVIC IMPROVEMENT PLAN FOR MINNEAPOLIS  
AND SAINT PAUL.

BE ACCEPTED AS FULFILLING THIS PART OF THE REQUIREMENTS FOR THE

DEGREE OF MASTER OF SCIENCE IN ARCHITECTURE

*David Varon*  
In Charge of Major Work

*Frederick W. Mann*  
Head of Department

Recommendation concurred in:

Committee

on

Final Examination

219583



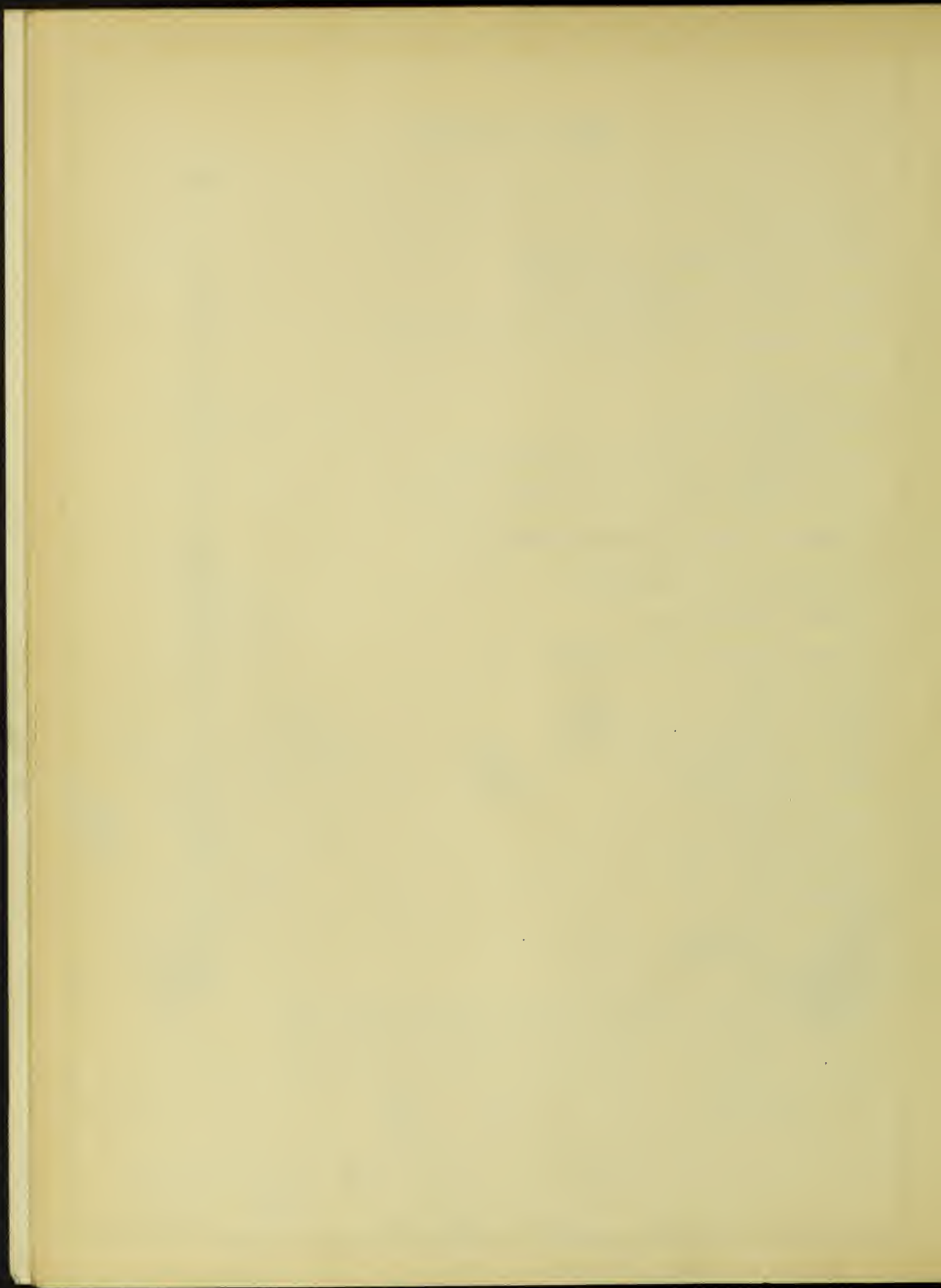




## TABLE OF CONTENTS

	Page
Introduction	1
Civic Improvements in General	4
The Problems of a Modern City	12
The Geological Conditions of the Vicinity	19
Water Supply	21
Building Materials	23
Climatic and Geographical Conditions	26
History and Growth of the "Twin Cities"	29
A General Review of the Proposed Plan	38
Transportation Facilities	41
Public Conveniences	44
Traffic Avenues and Streets	50
Park System	51
The Districts of the Cities	54
The Civic Center	60
Legal Aspects	62
Estimates of Cost	63
Conclusion	63
Acknowledgments	64
References	65
Illustrations - Series of photographs of the site of the civic center and drawings of the new scheme.	





## A PROPOSED CIVIC IMPROVEMENT PLAN

FOR

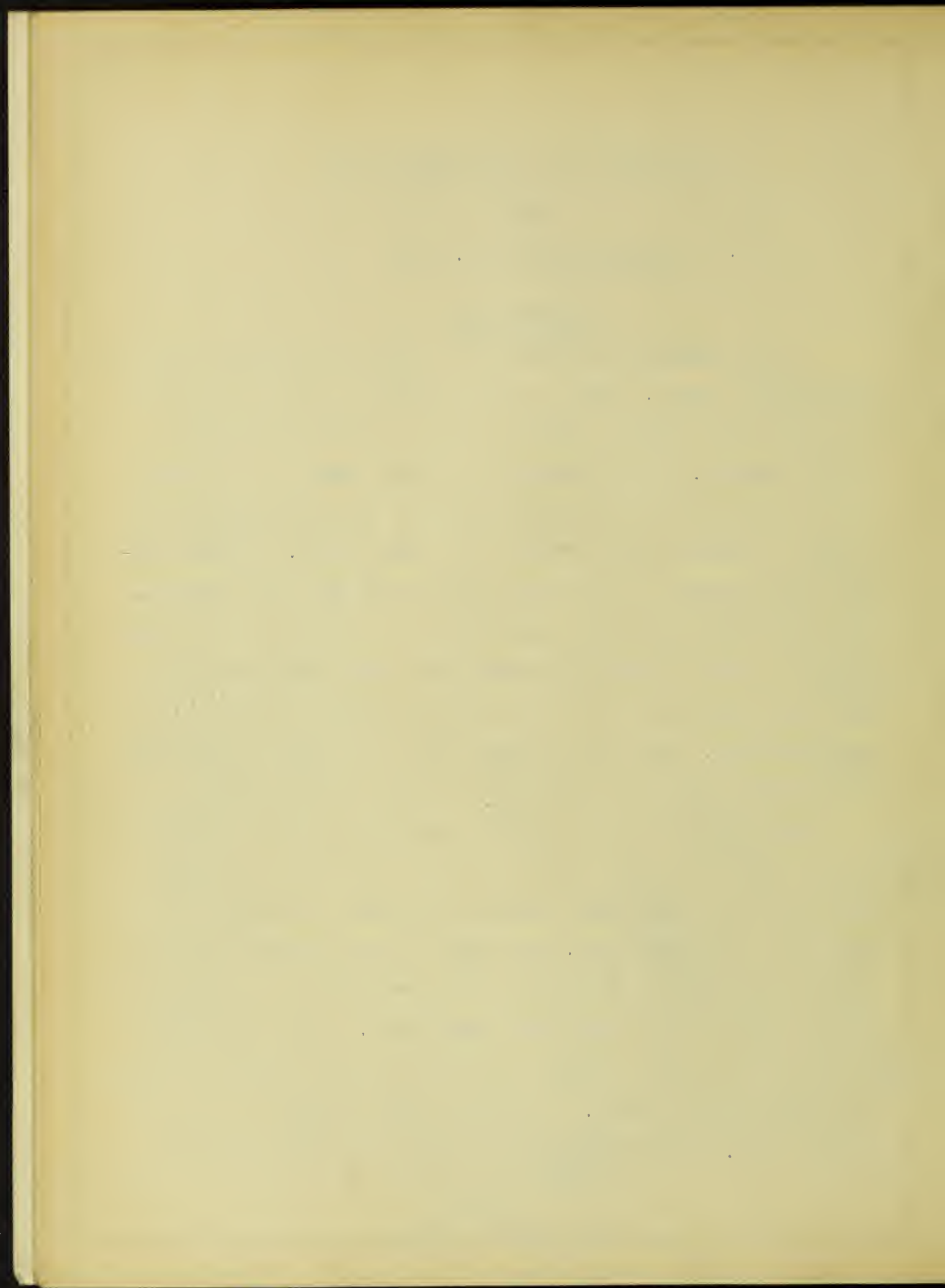
MINNEAPOLIS AND ST. PAUL

### Introduction

In introducing the subject of a "Civic Improvement Plan for Minneapolis and St. Paul", it will be well to note a few facts concerning the present relation of the two cities and their future outlook. City planning on a large scale is attracting the attention of the citizens of many of the most enterprising cities of America and in fact of the whole world. In this respect the citizens of the "Twin Cities" have not been backward, but have been considering improvements on a large and ambitious scale for their respective communities, and, considerate of the close relation of the two cities, forming as they do one agglomeration, they have reckoned with each other, in order to secure some sort of coordination of their separate plans.

The spirit of intense rivalry, which has been so evident in the relations of Minneapolis and St. Paul during the half of century which saw them develop from small settlements of energetic pioneers in what was known as the great wilderness of the northwest, to large and busy communities, is rapidly being displaced by a spirit of cooperation. In no other such similar case in this country has there been such bitter jealousy as existed in this case. But this already belongs to the era of the past. Mutual good will has taken the place of bitter





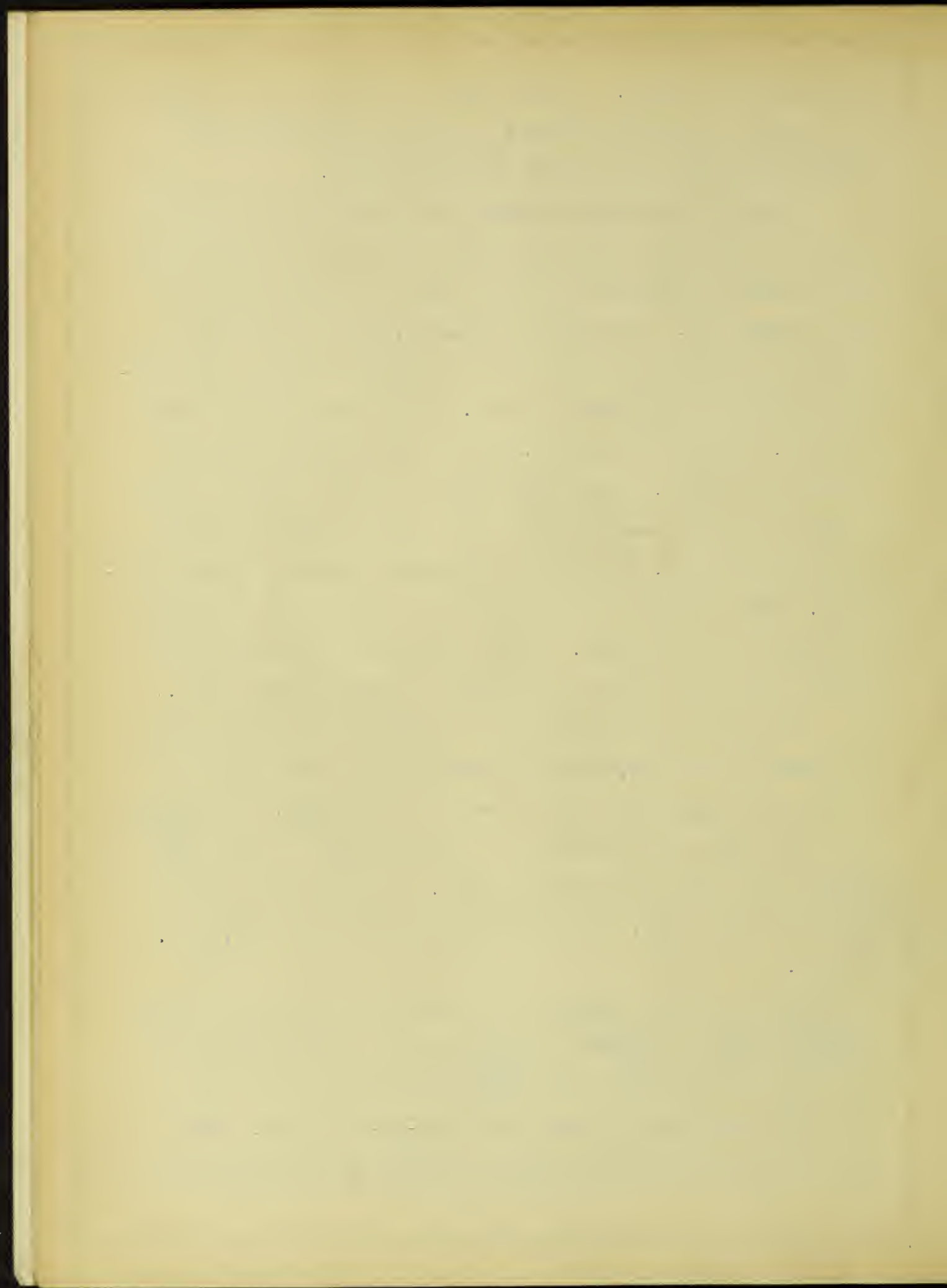
criticism and knocks. The new spirit, starting with a union of work and trade and followed by social cooperation, will eventually result in a closer political union.

It is the tendency throughout the world at the present time for interests, that are alike, but have been competitive and strongly antagonistic to each other, to merge and form one strong unit. But this is done, only, when it has become evident to those interested in the competing forces, that cooperation will be of benefit to all. In the case of the "Twin Cities", a number of factors, such as their having the same tributary country, their being built so close together, their tendency to grow towards each other, and the building up of a midway district, have made cooperation a subject of consideration. This subject is the talk of the commercial and social interests of both cities. Greater harmony is the desire of every active and vitally interested citizen of both cities.

This idea of cooperation in a commercial and social way, is bound to continue, and will eventually grow till the two cities are one, politically, as well as other ways, and instead of there being two "metropoli of the northwest", there will be one far greater in size and power. If such were a fact at the present time, the city would be one of over 540,000 people.

All the larger cities of the world are finding that their ordinary course of growth has brought many inconveniences and an inadequacy of many of the necessary features, that are of vital importance to every modern up-to-date city. This realization has started a movement towards comprehensive city

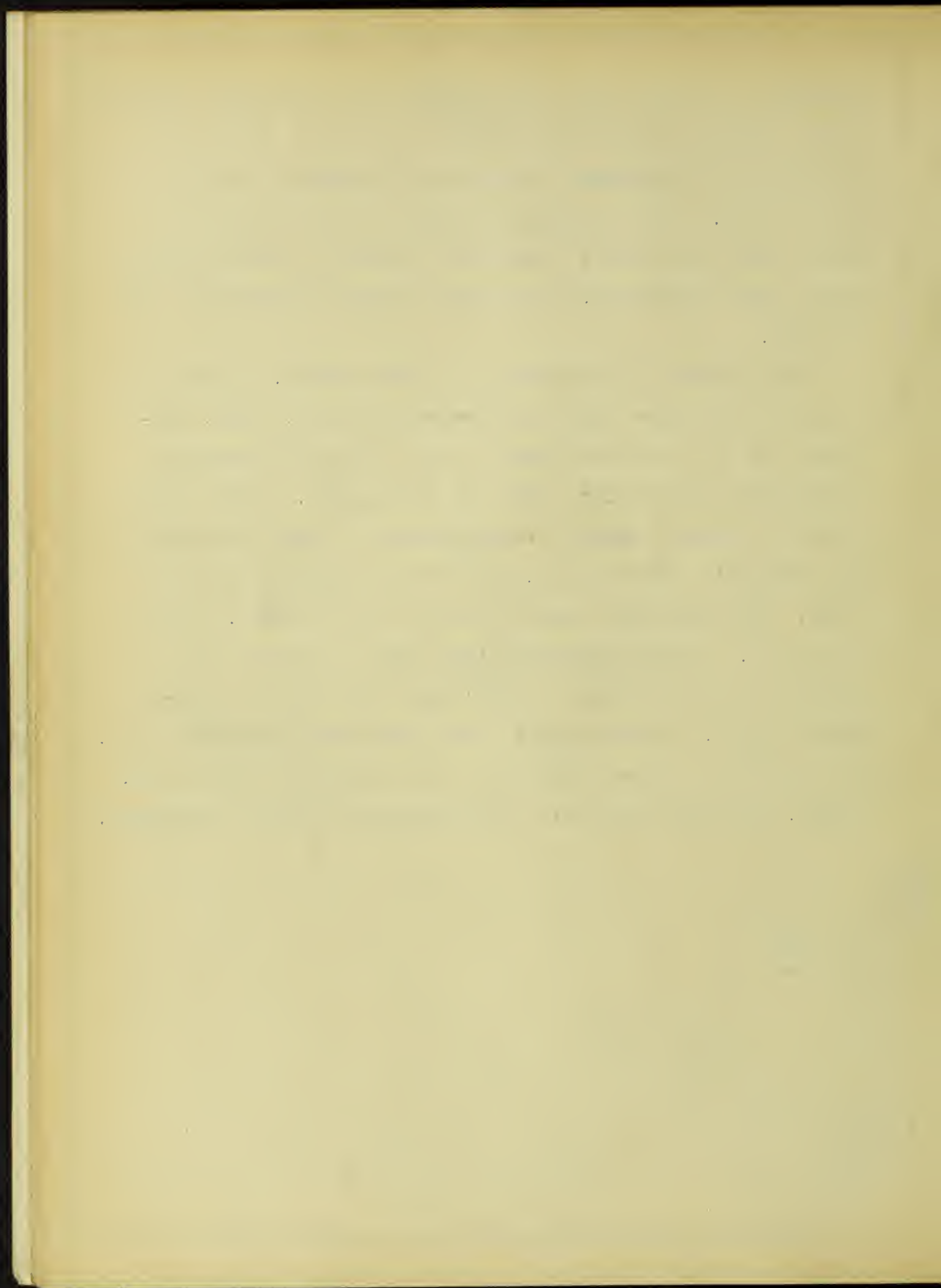




planning, a movement that has rapidly become absolutely necessary to the economic welfare, beneficial to the social life, and inspiring to the aesthetic sense of the citizens living in these cities. Such planning will secure greater economy of time, space, and energy, as well as to secure healthier and better moral conditions, and a happier mode of existence to the citizens.

The problem of this thesis, as stated before, is that of a "Civic Improvement Plan for Minneapolis and St. Paul", combining the two cities into one in such a way as to secure an intelligible and sensible scheme of development. Such a plan involves a great amount of unprejudiced, as well as careful and deliberate consideration, and a broad conception of the items, conditions, and proper solution of the problem. Realizing this, a careful study has been made of the historical examples of city building, the solution of problems of other modern cities, and examples of civic improvement in these cities. The following chapters will give a short review of the history, theory, and modern solution of the problems of civic improvement.

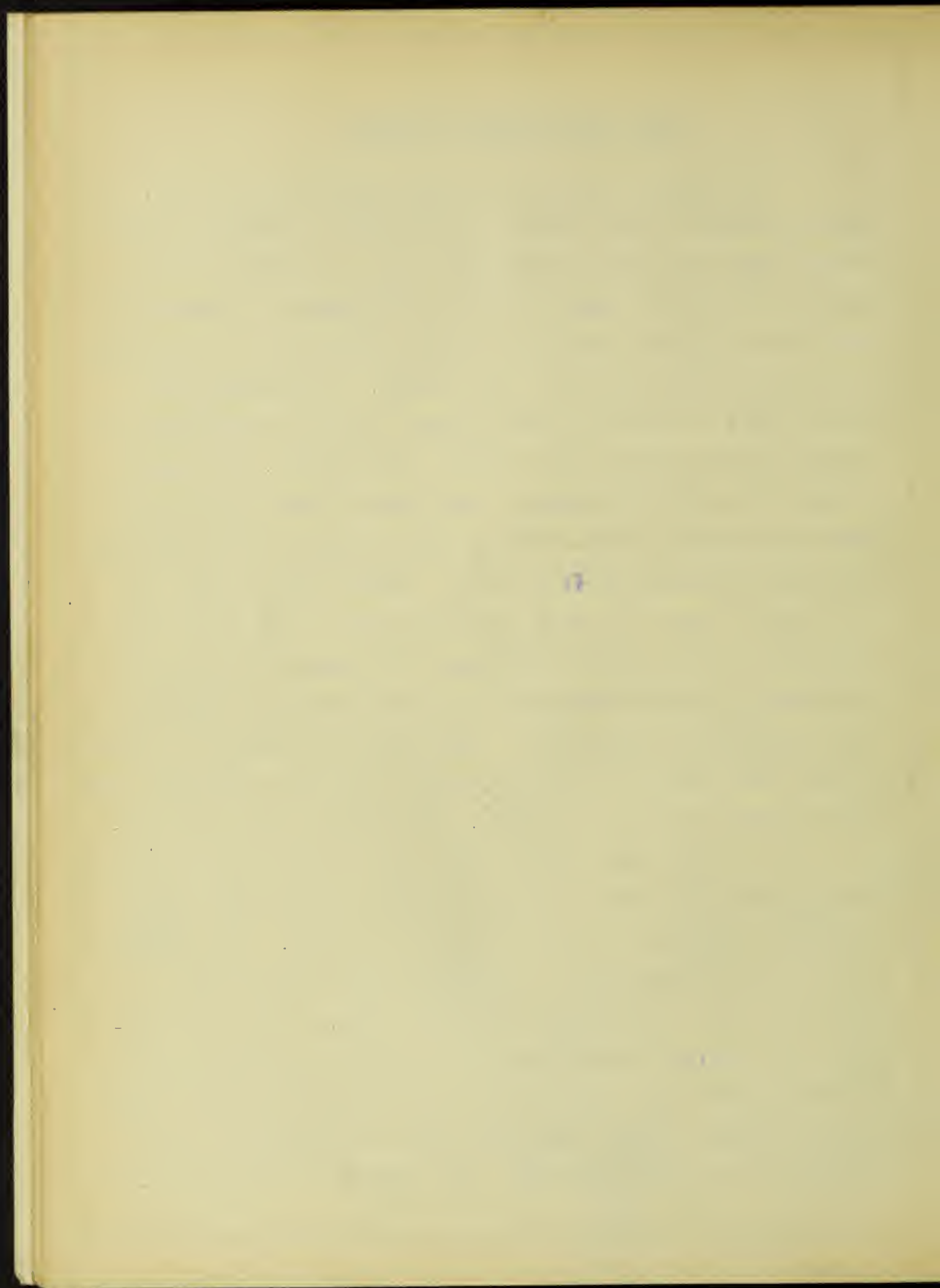




### Civic Improvements in General

The map of a city is intensely interesting to study. It seems to express so well the age and the life and characteristics of the people who lived or are living in it. It indicates the history of the place almost as well as the examples of architecture that are found there. Both are strongly indicative of the customs, religion, and moral ideals of the citizens. A picturesque and quaint town is evidenced by the extremely informal arrangement of streets and the lack of great traffic thoroughfares. The people of such a city are also quaint, and it may be said, picturesque. Their architecture is also informal and charming in its simplicity. The simple and peasant-life prevails. Another type of city, such as is seen in some of the less civilized parts of the world where the people are of a totally different civilization from ours, is indicated by its fortified walls and gates, and by its symbolical and overdecorated architecture. Such cities are Asiatic or oriental; and their peoples are superstitious, only partly civilized, and great lovers of color and ornament. The ancient cities are similar to them, except that in most cases their civilization was the highest form known during their golden age, and that their monuments of architecture are still marvels of history. The types of cities found in Europe which originated during the mediaeval period all have their own distinguishing marks. Their maps indicate their ages, and changes that have occurred due to the progress of civilization. The outline of the old city wall is still shown, though the walls in most cases have been torn down and the space used for an encircling boulevard. The irregularity of the lay-out

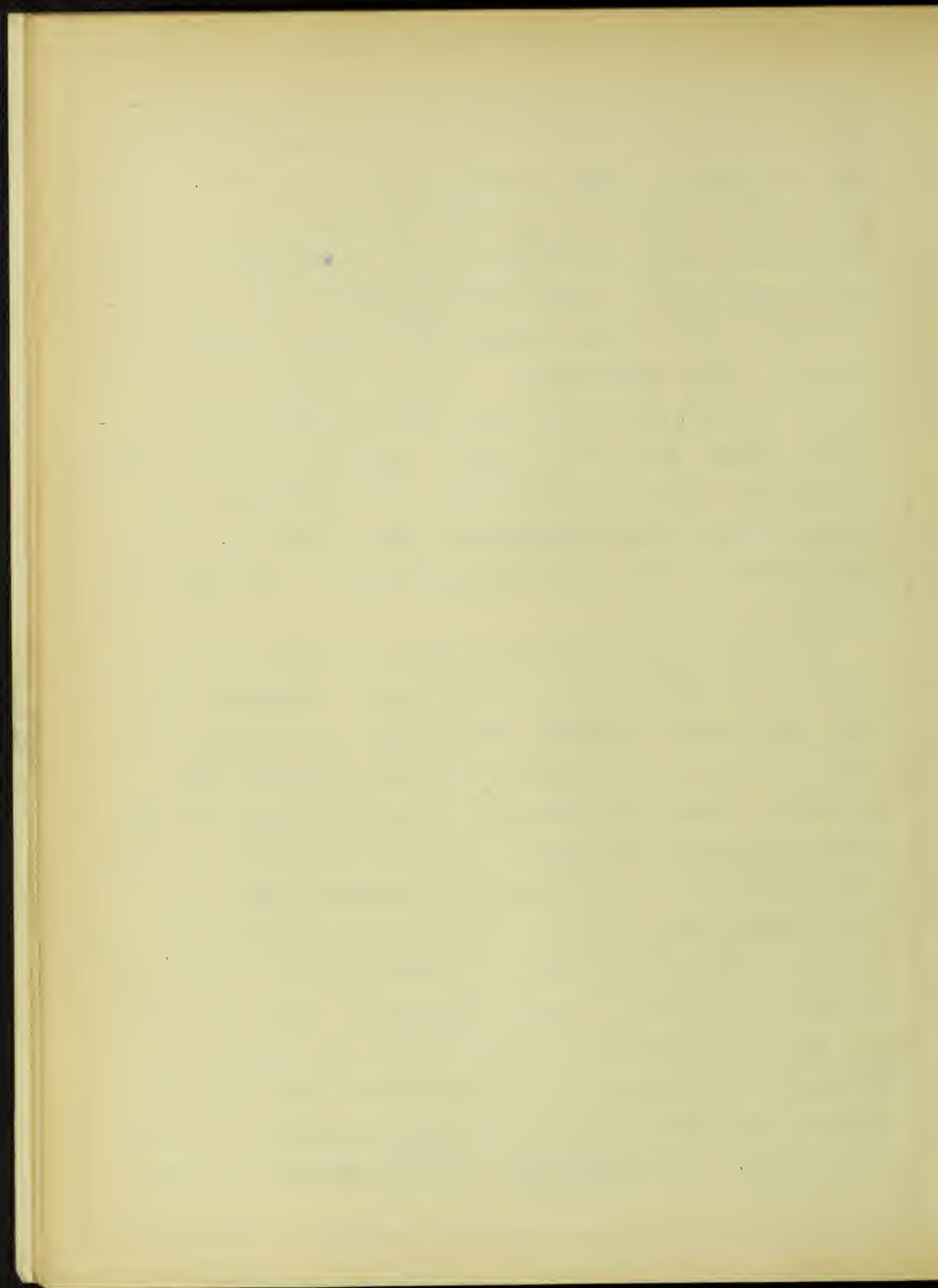




of the streets is evidence of a very natural growth. These irregularities are practically permanent and all modern improvements have been forced to follow the outline of the old lay-out. London, Paris, Berlin, Vienna, and Moscow are all examples of this type. The American city is characteristic for its regularity of plan. The gridiron system of streets with rectangular blocks, and without regard for the natural contours of the ground, indicates rapid growth and strong commercialism. In the case of most of the western cities, at least, the site had been previously laid out by the government system. The greatest possible immediate return was sought in laying out the blocks in rectangles, and no foresight used against possible future congestion and poor circulation. In all types, however, there are great possibilities for development and change for the better.

A glance at a few historical examples of cities will be of great value in solving some of the problems of Minneapolis and St. Paul. The prominent American architect, Mr. D. H. Burnham, has pointed out in his book entitled "The Plan of Chicago", that throughout the ages there have been two leading motives that have governed the location of cities: either the site offered a natural means of defense; or it was a natural commercial center about which fortifications were built. The question of defense has gradually become of less importance; modern cities are built up in places which offer the greatest factors for commercial growth.

The ancient Egyptian cities were so well protected by natural defenses that the people turned their energies toward building monuments and temples which are still among the greatest wonders of the world. The buildings were all built to endure, and were



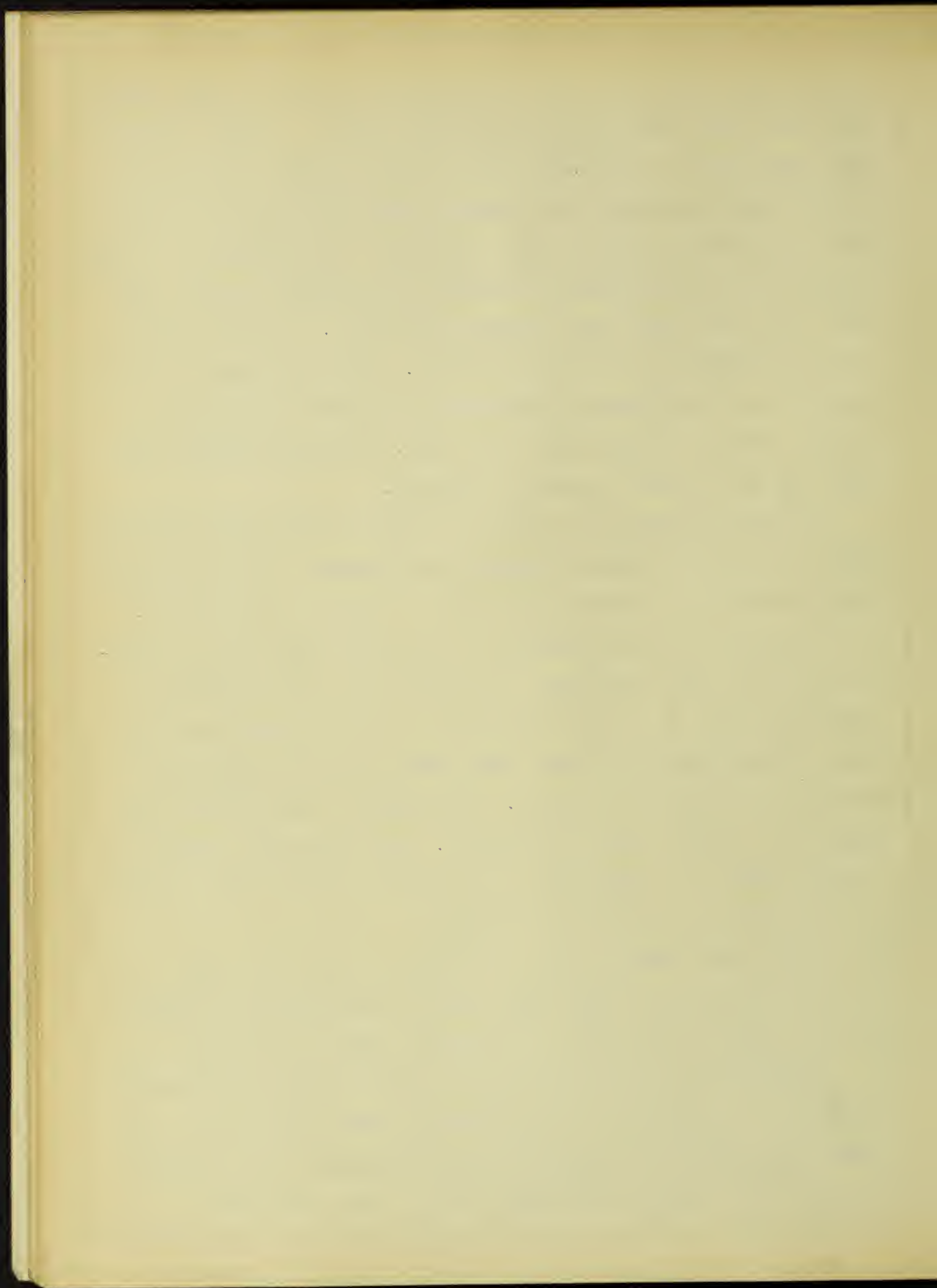


furthermore, preserved by the favorable dry climate of that region. The cities were dominated by huge stone temples. A short distance away from them the graveyards were placed, in which the numerous and now famous monuments were erected, the principal ones of which were the pyramids, sphinxes, and obelisks. The prominence of these features is due to the great reverence the Egyptian had for their dead, and their desire for permanent existence. The most famous cities of Egypt were Memphis and Thebes. Thebes was built on both sides of the Nile River and contained a wonderful collection of temples, such as Karnak, Luxor, and Edfu. Nothing definite, however, was done toward systematic planning.

The first great city of which records have been made and which was to some extent planned carefully was Babylon. Plans were made and carried out on a large scale for its defense and adornment. The defense, due to the flatness of the country and lack of natural protection, was a huge wall, high and thick, and fortified at different points by turrets and towers. It was located on both banks of the Euphrates River. This river was well bridged, and protected at the walls by gates. Wide streets were laid out and magnificent temples and palaces built. This splendor, together with her power as a commercial and political center added greatly to the majesty and grandeur of Babylon.

Among other planned cities of ancient Western Asia were Niniveh and Persepolis with their gorgeous Assyrian and Persian palaces, and Jerusalem with its beautiful temple of Solomon.

Around the Mediterranean were a number of famous cities which are known in history for their splendor. Among them are Tyre and Sidon, both great commercial cities; Carthage with its defenses, aqueducts, and palaces; and Troy with its walls and harbor.

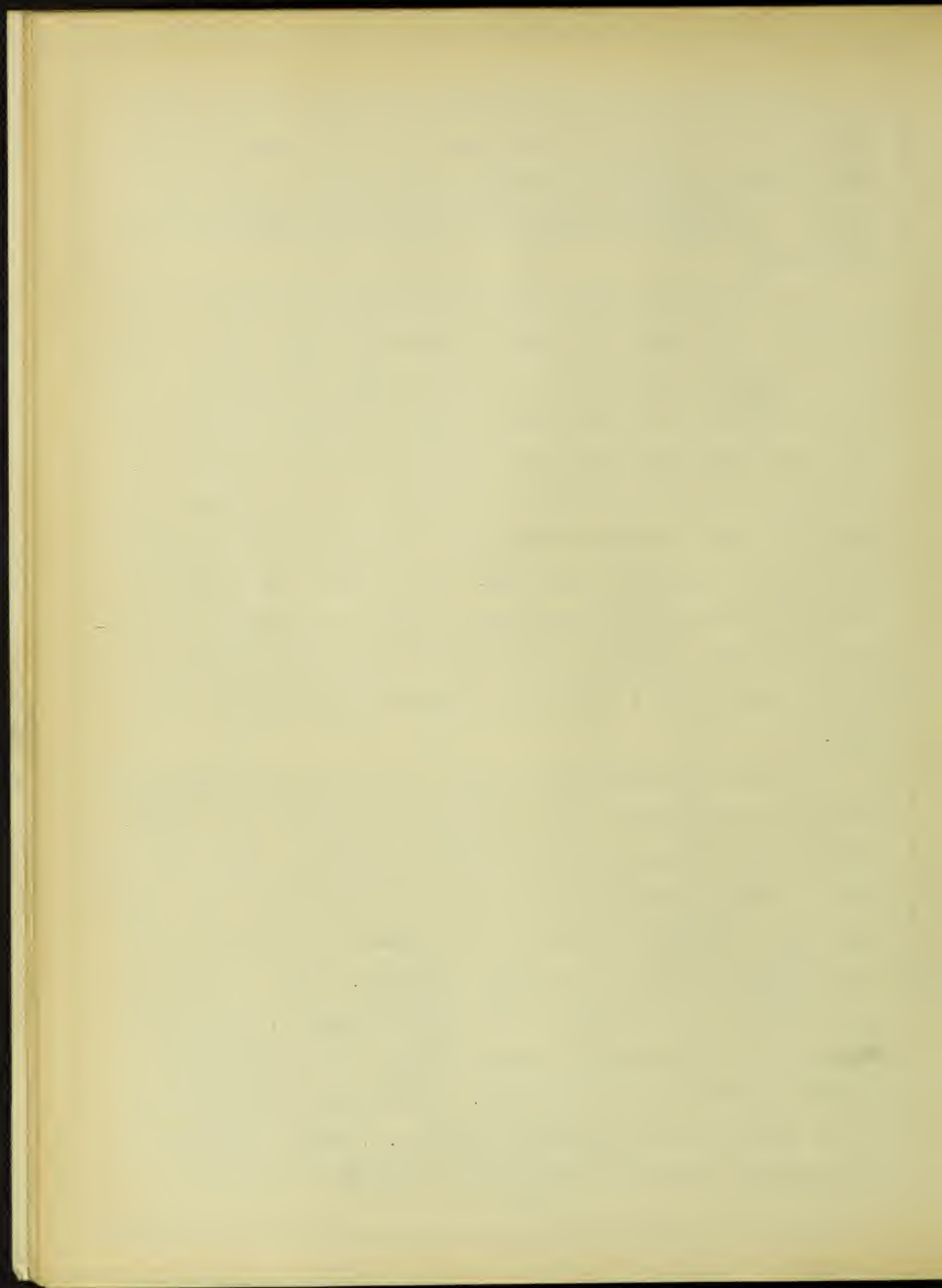


Other interesting ancient cities are Pekin with its temples of heaven, its palace, the great wall, and wide boulevards and streets; Tibet with its high walls; Anuradupura, the old time Buddhist capital; and Mexico, the rich and well planned city of the Aztecs.

The first cities which present the modern world with ideals for civic improvement are those of Greece and Rome. Athens stands for the highest expression the world has known of civic art. The Acropolis in its imposing position forms a splendid crown for a city filled with good examples of public and private buildings. Pericles, the great architect and builder of this Acropolis, has given the world a piece of work which has preserved its freshness and charming elegance to this age. The necessity for defense in the earlier years of the existence of Athens later became less important, giving way to the Greek passion for beauty which gave cause for the creation of a new style of architecture, supreme in its kind.

In Rome we find the first example of a city which offered all the advantages necessary for a healthful existence to its inhabitants. Here it was that place was first given in a city for parks, gardens, pleasure grounds, and public squares. The large gymnasiums, bathing establishments, stadiums, and arenas offered abundant opportunities for athletic exercise. Rome is noted for its forums or civic centers, which are open squares, adorned with monuments and surrounded by treasure houses, the senate house, courts, and other public buildings. These forums are recognized as the masterpieces of Roman architecture. Restored plans show the remarkable ability of this people to lay out complicated





palaces, public buildings with many small units, and extensive groupings of buildings and features, with a very pleasing result.

There are other famous Roman cities, such as Pompei and Herculaneum, which were built on extensive and magnificent lines. The Romans were also famous, as is well known, for their road building, bridge, aqueducts, and forts. Many of the first two are still in use and as good as ever. As the Greek civic art showed a high degree of culture, so the Roman gave the impression of strength, power and supremacy.

During the middle ages following the times of Roman dominance there were a number of cities, especially in Italy, which were developed wonderfully along the lines of civic beauty. Prominent among these were Venice, Genoa, Ravenna, Florence, Verona, Pisa, Granada, Caen, Orleans, Cologne, Nuremburg, Oxford, Cairo and Constantinople. The Italian cities continued to develop and thrive during the early days of the Renaissance.

Venice has been called the "gem" of Italy. The traditions of old, with many examples of architecture that date back to the old civilization of Rome have been linked with the new ideas of the dawn of modern times. Her industries and trade brought riches to her that were expended largely in beautifying the city, erecting public buildings most delicate in detail, and creating harbor facilities and a complete canal system for local trade and circulation.

Special mention should be made of the admirable group of buildings in the citadel of Granada built by the Moors. The entrance feature or Hall of the Ambassadors, leading to the Court of Alberco, and then on to the Baths and the famous Court of Lions,



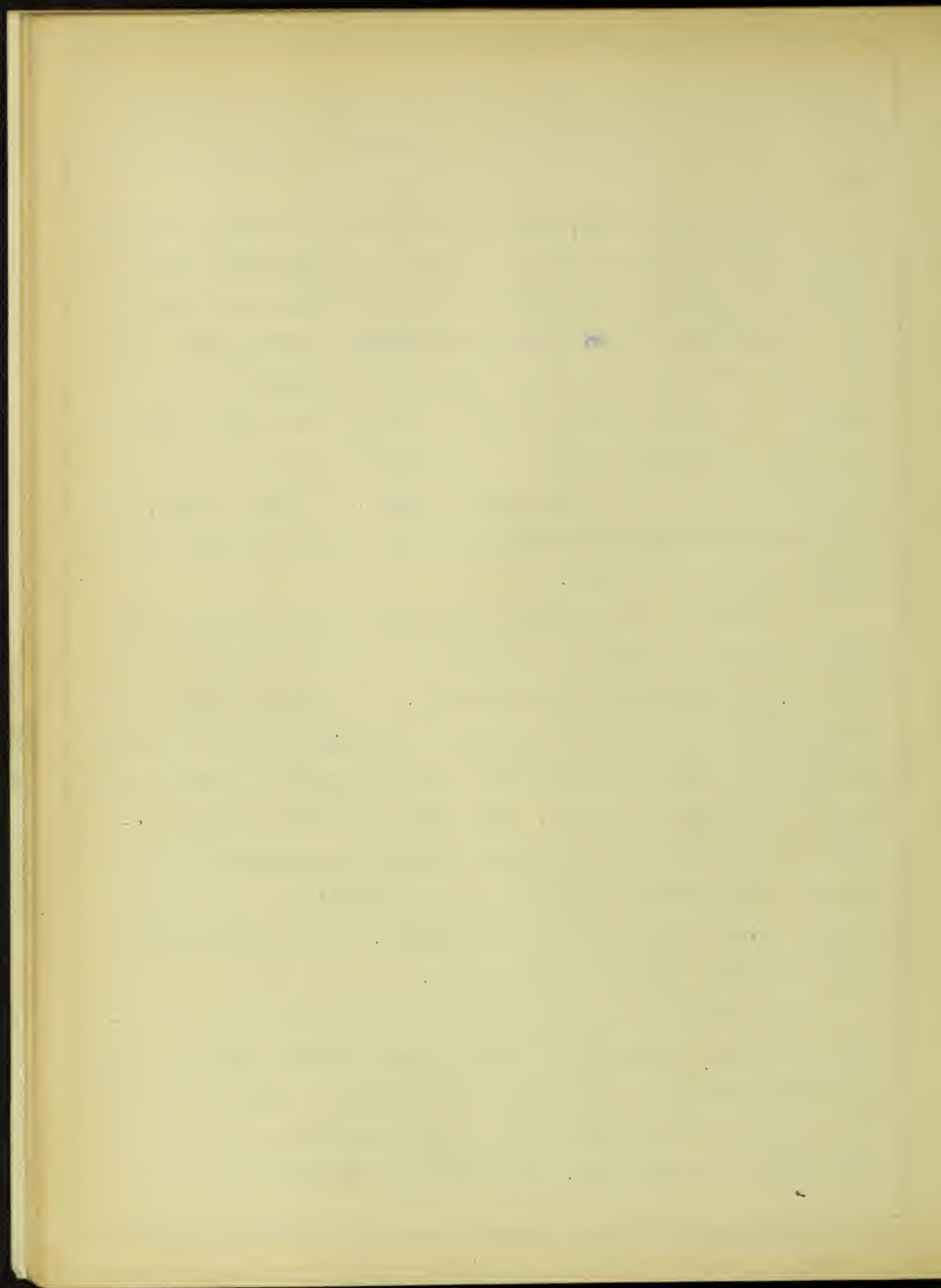


about which are grouped halls of great grandeur, forms with the rest a wonderful composition with an unsurpassed display of minute detail.

Nuremburg, in Germany, enjoys the distinction of being the most picturesque city in the world. Enclosed by a formidable wall, marked at intervals by interesting towers and gates, and enhanced by a characteristic town square and Rathhaus, charming and prominent gable roofs, and the usual dominating cathedral, it forms an example for a small town. It may be mentioned here that Nuremburg and many other German cities are considering or have recently adopted extensive civic improvement schemes. In this respect, many of the smaller German towns are in the lead of the movement among modern cities of the world.

As feudalism lost its hold on Western Europe, and the cities began to merge and form strong nations, a new era in architecture, that of the Renaissance, was ushered in. This was in the sixteenth century. The invention of gunpowder, the compass, and the printing machine, and the great Reformation, led to a complete change in the type of the cities of Europe. The walls for defense became useless, the new intellectual movement brought in a desire for the classic architecture as well as classic literature, and discovery brought in new factors of power and wealth. It is in this period that the modern city has its beginning.

City planning in a large scale and taking the city as an organic whole was adopted and started in Paris during the time of the early Renaissance. The first known complete plan for a city that was drawn out was that of Sir Christopher Wren for London in 1666, after the great fire. This plan was set aside due to the



selfish interests of the property holders of that city. London has since paid dearly for this neglect and has spent over \$300,000,000 in meager improvements, when only \$30,000,000 would have been the cost of Wren's complete plan.

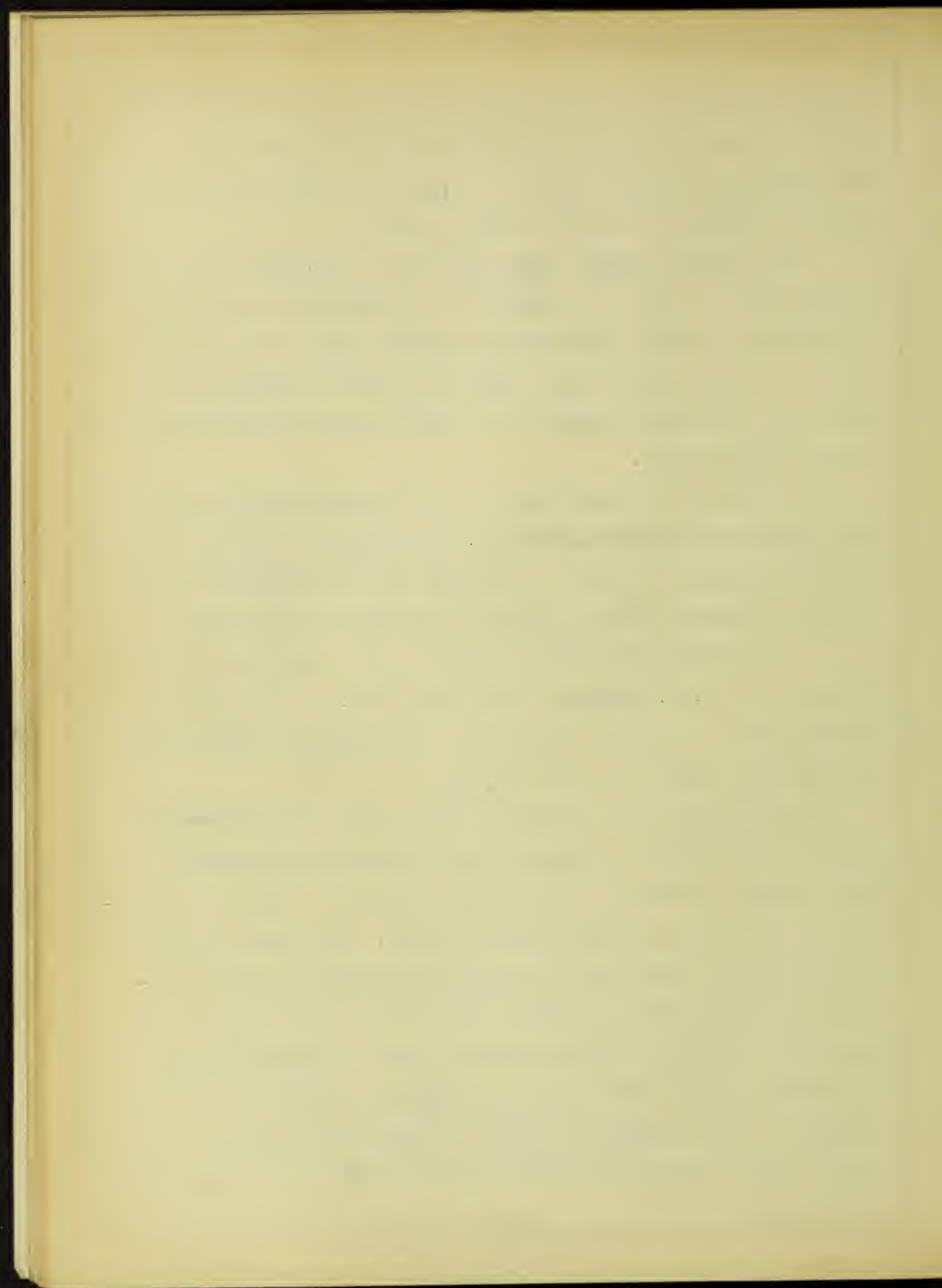
The movement towards civic improvement started in Germany at a later date. The Germans modified the French scheme of straight avenues intersecting one another at points that are developed as centers of interest, and have added the charm of curved streets and more picturesque treatment in order to keep the individuality of the towns intact.

A reasonable combination of the two schemes seems to be the best solution for any modern city. The French or classic idea gives a monumental aspect to the city, while the German or more natural treatment gives it greater individuality and charm.

An extremely interesting account of the growth of Paris is given in Mr. D. H. Burnham's book on Chicago. In fact, he has pointed out the leading features and facts in city building from the earliest times up to the present.

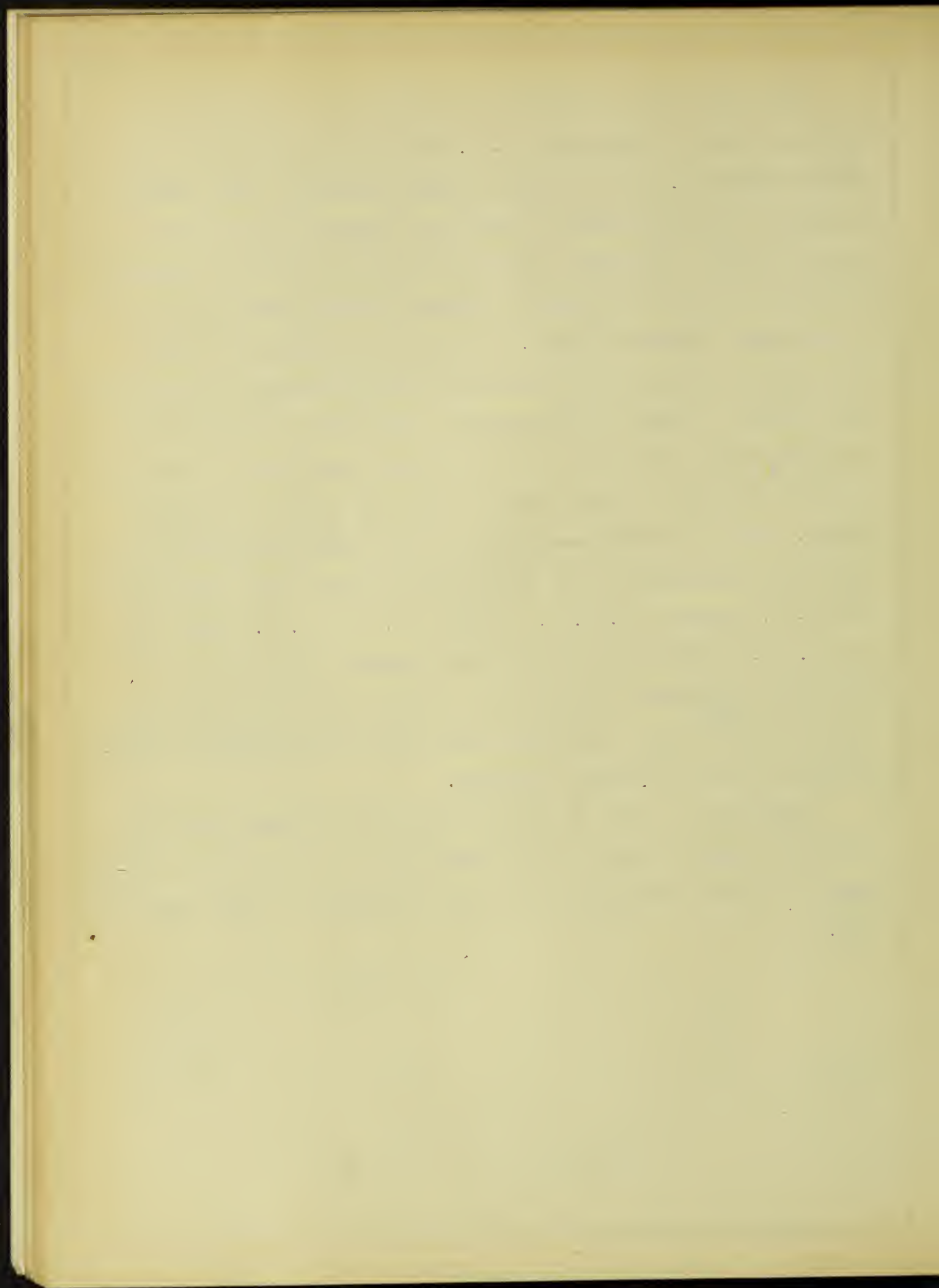
The smaller cities of England have many of them recently adopted comprehensive schemes of town planning and housing of the laboring classes. They have been hampered a great deal, however, by the lack of town planning powers. The owner's main interest has too often been to produce the maximum immediate increase in value of his property; and until recently very little was done to give the city governments power to acquire ground for public needs. There are many examples in some of the smaller places of futile efforts to create a comprehensive and convenient plan for the community, and many of these efforts have been left incomplete.





The first city in America to be built on a comprehensive plan was that of Washington, D. C. Due to the foresight of our first president and his aides, a French engineer, Peter Charles L'Enfant was commissioned to draw up a complete plan for the capital city. His scheme, as is well noted, was that of imposed diagonal avenues converging at different focal points, upon a rectilinear system of steets. The city was planned as a unit and nothing was left out that would help in producing as finished and refined a result as was possible. The plan was fortunately adopted, after a great deal of ridicule, was passed on its supposed impracticability, and the city was laid out along the proposed lines. Recently plans were prepared by a committee appointed by the Senate Committee of the District of Columbia, and composed of Mr. D. H. Burnham, Mr. F. L. Olmsted, Jr., Mr. C. F. McKim, and Mr. A. St. Gaudens, to complete and reanimate the plans of L'Enfant. In spite of opposition of those who think only of the present, these plans have been carried out to the point of establishing its most important features.

Gradually the need of comprehensive city planning is being impressed upon the minds of the people, and at present it is regarded as much a necessity as it was a dream not so many years ago.



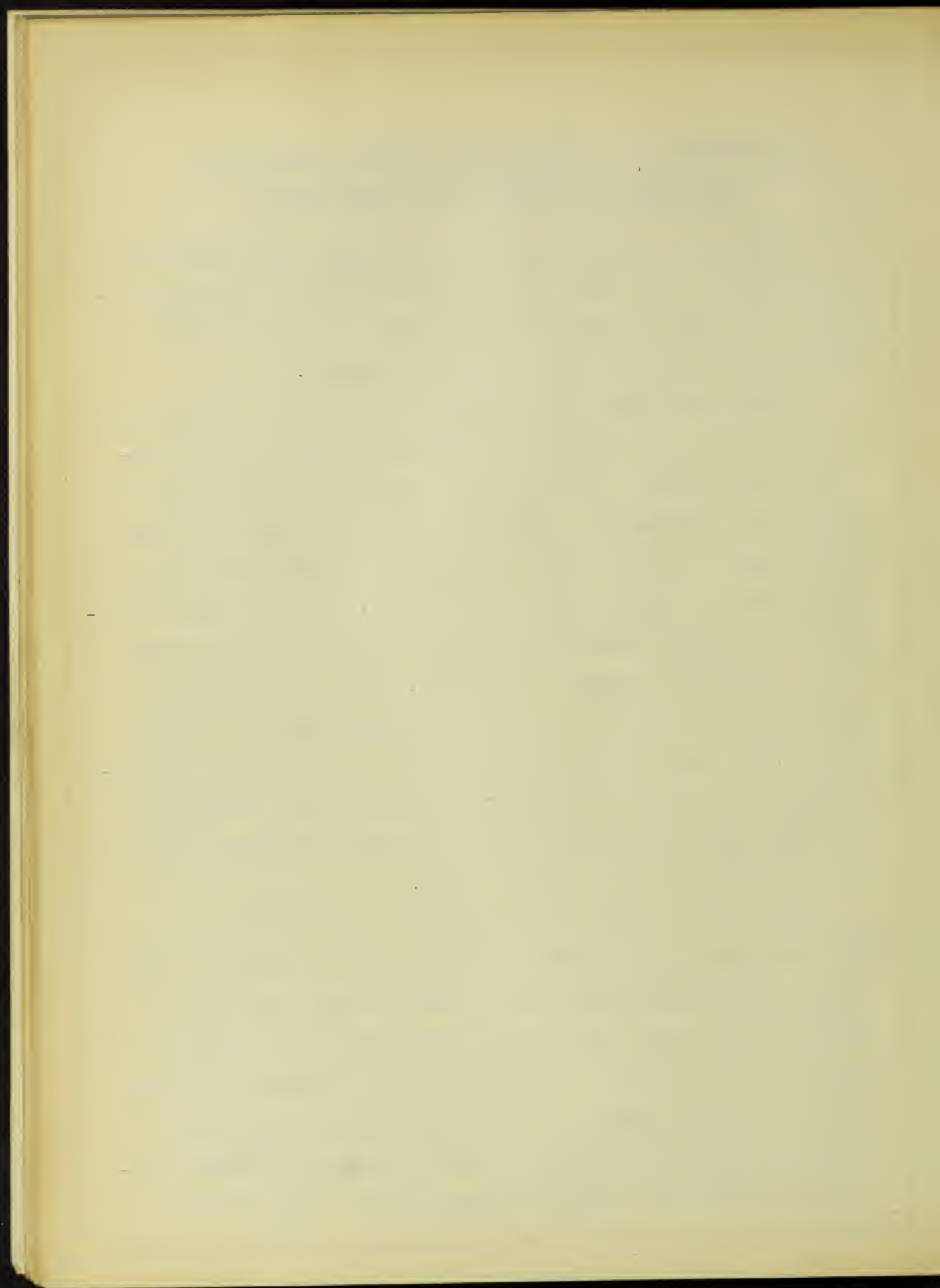


The Problems of a Modern City, Theory of Civic Art  
and Examples of Recent Civic Improvements

In making a thorough study for the proper civic improvement of any modern city, there are many considerations to be taken account of in order to more perfectly understand the situation, the advantages and the possibilities of the problem.

A good knowledge of the geological conditions of the vicinity helps in giving the factors for building materials, mining products, water supply and water power, chemicals, lumber production, agricultural products and the assets that bring wealth and power to the communities near them. A study of the topography and natural charms of the place will give possibilities for future development of the park systems, the natural direction of the growth of the city and its range of expansion. When the conditions are similar in these respects to those that exist around the "Twin Cities", the wealth of building materials, mining forests and agricultural products, water supply and water power, possibilities for improvement and beautification and needed expansion, there are few places which are so richly blessed.

The climatic conditions and prevailing winds must be taken into consideration in giving a character that is special to this place, and in placing undesirable features where they will be least objectionable. The fact that the city is in a tropical or temperate, wet or dry climate would bring in different problems to solve as to the character of its buildings. Objectionable features, such as stock yards, slaughter-houses, unsanitary cemeteries, crematories, garbage disposal plants, smoky factories

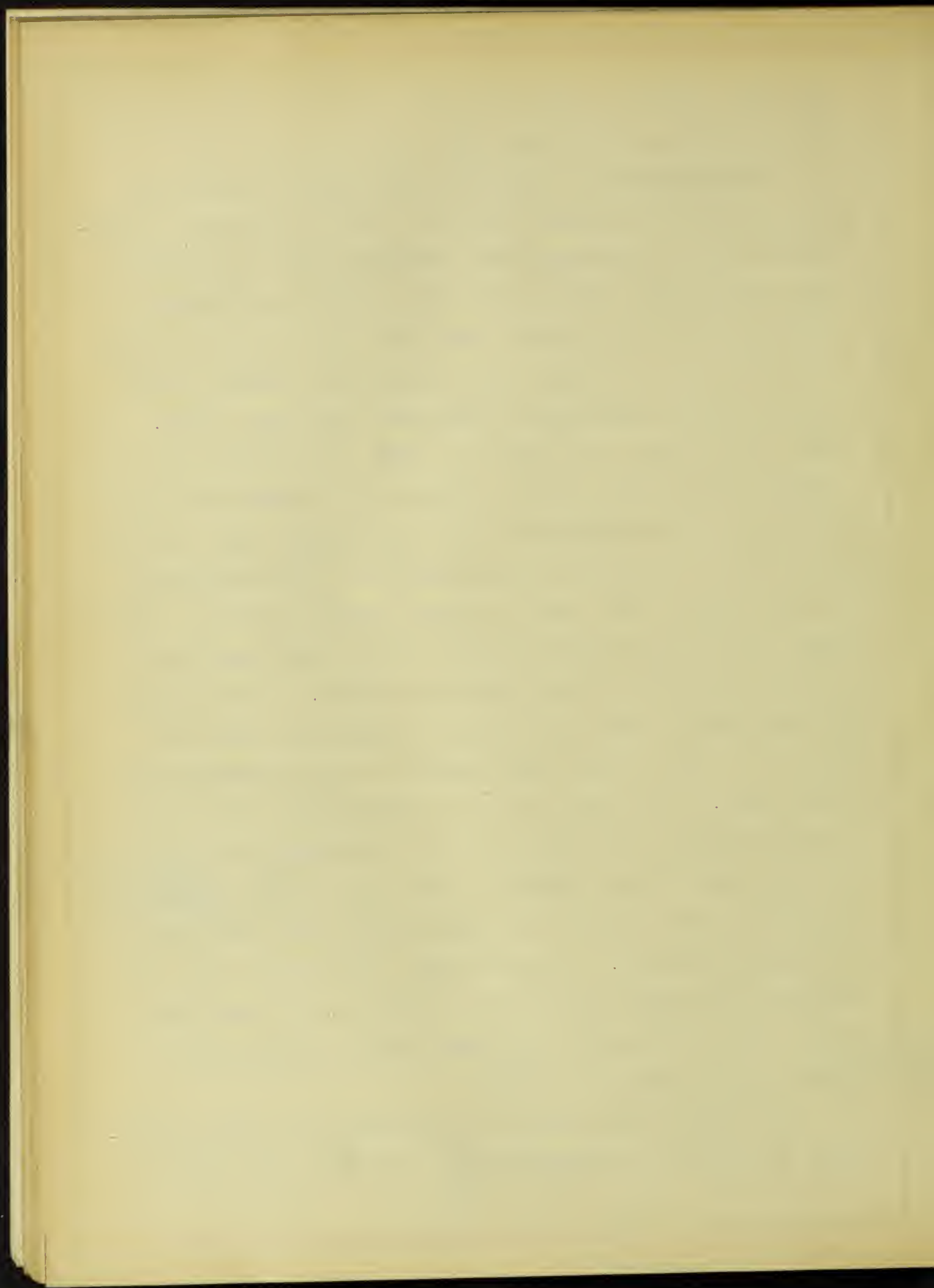


and others should be placed where the prevailing winds would not blow the fumes back over the city.

The geographical or commercial situation of the place in question must be carefully studied in order to ascertain the possibility of its permanency; the industries which are centered there for peculiar reasons, and their growth; the tributary country and the encroachments upon it by other centers; outlets to other centers; waterways; its position as a railway center; and its general importance in comparison with other cities. A city that is built up on industries that are temporary will have a rapid growth, which will be followed by a deadness that makes the study of its permanency of vital importance. Other centers will grow to a certain size, and then, due to the encroachments of other centers, will have no further increase in size. Still other cities will continue to have a steady growth each year, and the permanency of such a place is assured. In the case of the Twin Cities, there are a number of industries that are peculiar to them and make them supreme in the manufacturing of these goods. Due to the fact of the great water power of St. Anthony Falls and the character of the surrounding tributary country, which is best adapted to grain production, these cities have become great grain, flour manufacturing, and farm machinery distributing centers. In the same way, other centers have their supremacy in certain other lines of industry. The fact also, that a city is a sea port or a large inland railway center gives a special character to it.

The study of the history and growth of a city gives statistics of interest in understanding the traditions that exist

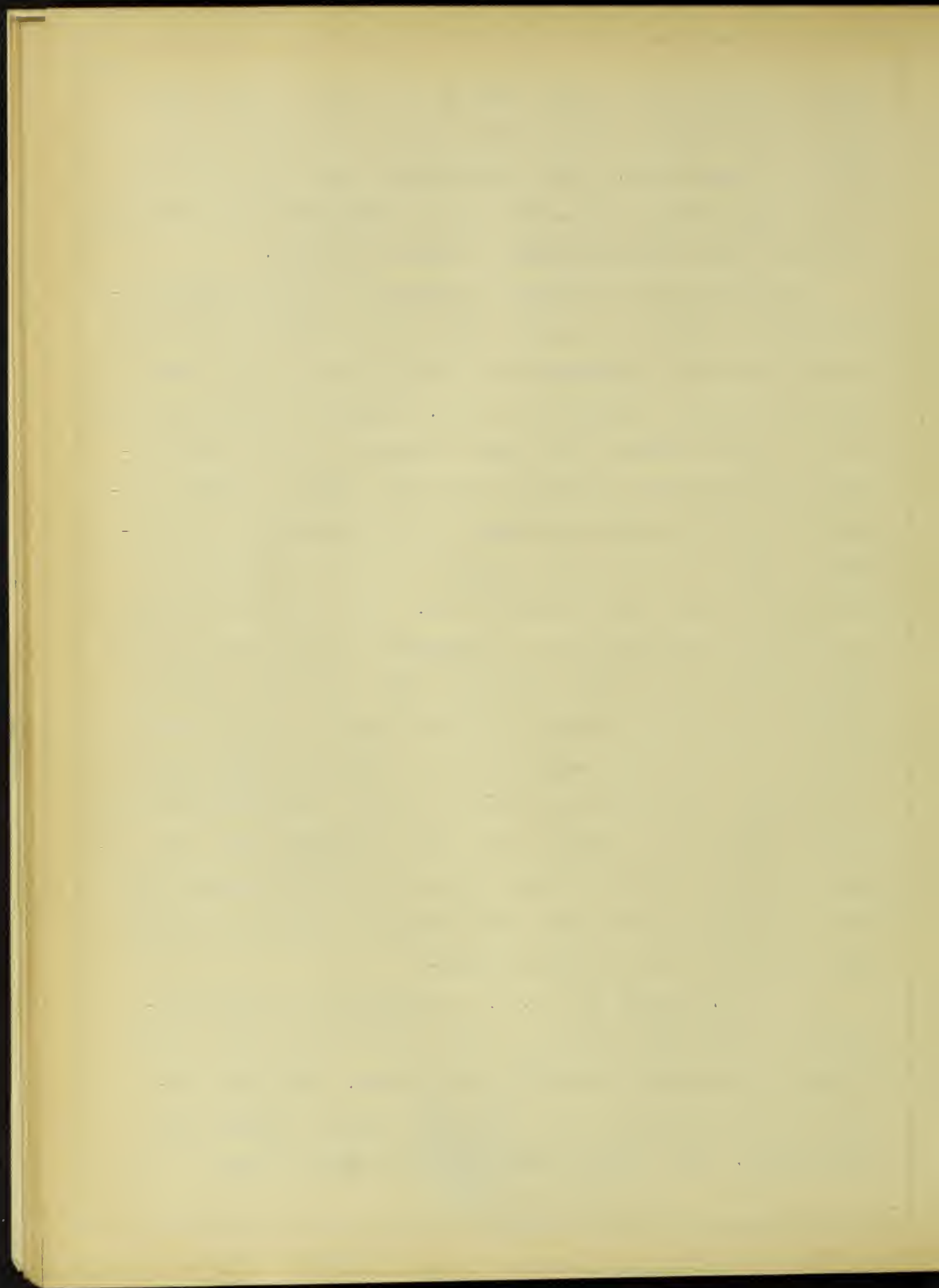




there, the pride the citizens take in the deeds of their prominent fellow-citizens, and the part the city has played in the history of the nation. This, incidentally, gives the character of the people living there, the class of immigrants that pour into it, their racial characteristics, ideals and morals.

The importance of systematic planning of cities is being increasingly recognized. A great number of the American cities have already considered improvements for their centers, and a number of them have planned a complete new city. Schemes have been proposed on all sorts of scales, both large and small, but all aiming towards securing better conditions of living, greater economic saving in arrangement and circulation and the satisfying of the aesthetic taste of the citizens. Among the first to consider an improvement scheme was Cleveland, Ohio. Here in a very moderate way space was provided about a rectangular strip of park for the city, county and government buildings, for the railway station, and for a few of the principal private concerns. Their scheme, however, was not easily made successful, due to friction among the different commercial and political forces. This friction will be met with in every locality, for there are always those who oppose forward movements of any kind; but since the movement has had such amazing growth since that time, it is safe to say that such opposition will quickly decrease.

Mr. D. H. Burnham and Mr. E. H. Bennett have acted as associates in preparing schemes of civic improvements for a number of the most prominent cities in this country. Plans have recently been perfected for San Francisco, Manila, Chicago, and Minneapolis. The study of these plans has been of great

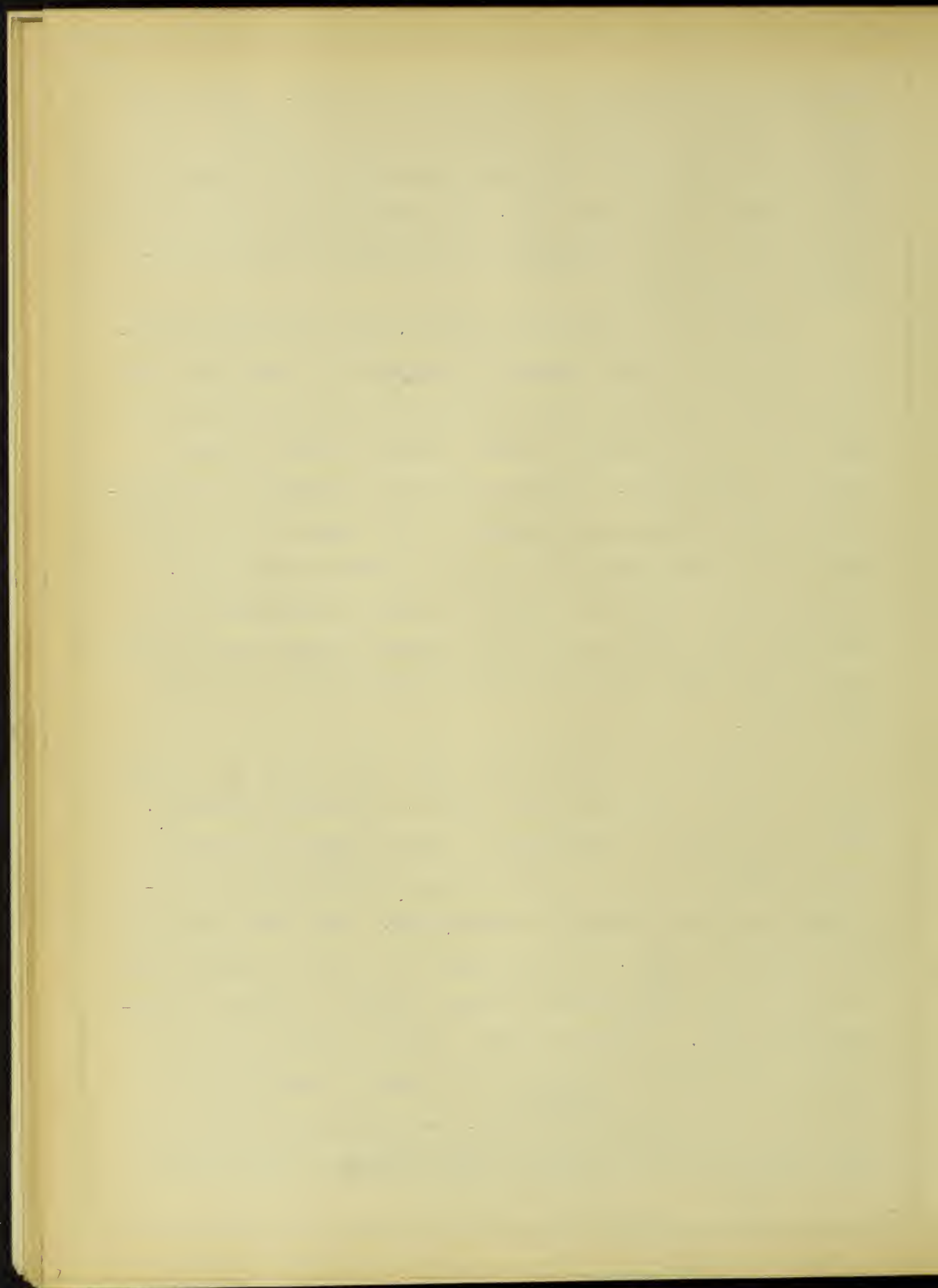




assistance in planning for a united "Twin Cities". The plan for Chicago has been carefully considered in all its aspects, and it can be said of it that it presents and solves very thoroughly all the problems of any modern city. The method used in handling this latter plan, has been followed to some extent in the plan presented in this thesis.

A large per cent of all the leading and enterprizing American cities have already adopted and worked out a scheme for park development, including large central parks and large tracts of park land on the outskirts, linked together by long pleasant drives and boulevards. The City of Boston is notable for its extensive park system. A new scheme has just recently been adopted there for the improvement of the entire Charles River basin. Kansas City has built up a wonderful system of boulevards from conditions that were far below the average natural possibilities, and has shown what can be done with comparatively little help from nature.

In working out a plan for any large city, there are several matters of vital importance that must be carefully considered. These are "Economy", "Efficiency", "Public Safety and Health", and the "Esthetics". It is safe to say that any scheme of improvement must satisfy these requirements. Any scheme will cost a considerable amount. The question to be asked is whether the investment will bring adequate enough returns to warrant the expenditures made. A large immediate expense may turn out to be a loss, or it may mean economy in the future, depending upon how wisely the work is carried out. An interesting note may be added here in regard to results in Philadelphia, Pennsylvania.



It was found out there that the expense of cutting a new diagonal street from the City Hall to Fairview Park was more than compensated by the increased value of property due to the new frontage made. Many other interesting items have been noted, which go to prove that there is economy in wise and extensive improvements.

Greater efficiency is another immediate necessity, and no doubt the need of greater public safety and care for the health of the citizen. These give strong moral reasons for a great expense in improving conditions. Prosperity is the result of making the city convenient, safe, healthful, and enjoyable to live in.

Greater cultural education among the rank and file of the people, followed by a demand for the satisfaction of the human cravings for greater beauty and better order in our cities, has stimulated the efforts of men trained in the esthetics of building construction, in creating some semblance of unity out of chaos, and transforming cities from a certain deadness or condition of false pride, to places of interest and permanent civic development. The impulse of every truly loyal citizen is to make his community a power and a center of attraction in the world. This feeling is expressed in the parks, public buildings, monuments and centers of education, which are established there, to the best advantage.

Each city has its different problems to solve and its own advantages to make use of or its disadvantages to overcome. Each part of the country has its own peculiar natural charms that assist greatly in the beautifying of our communities. All of the advantages should be seized and made the best use of.

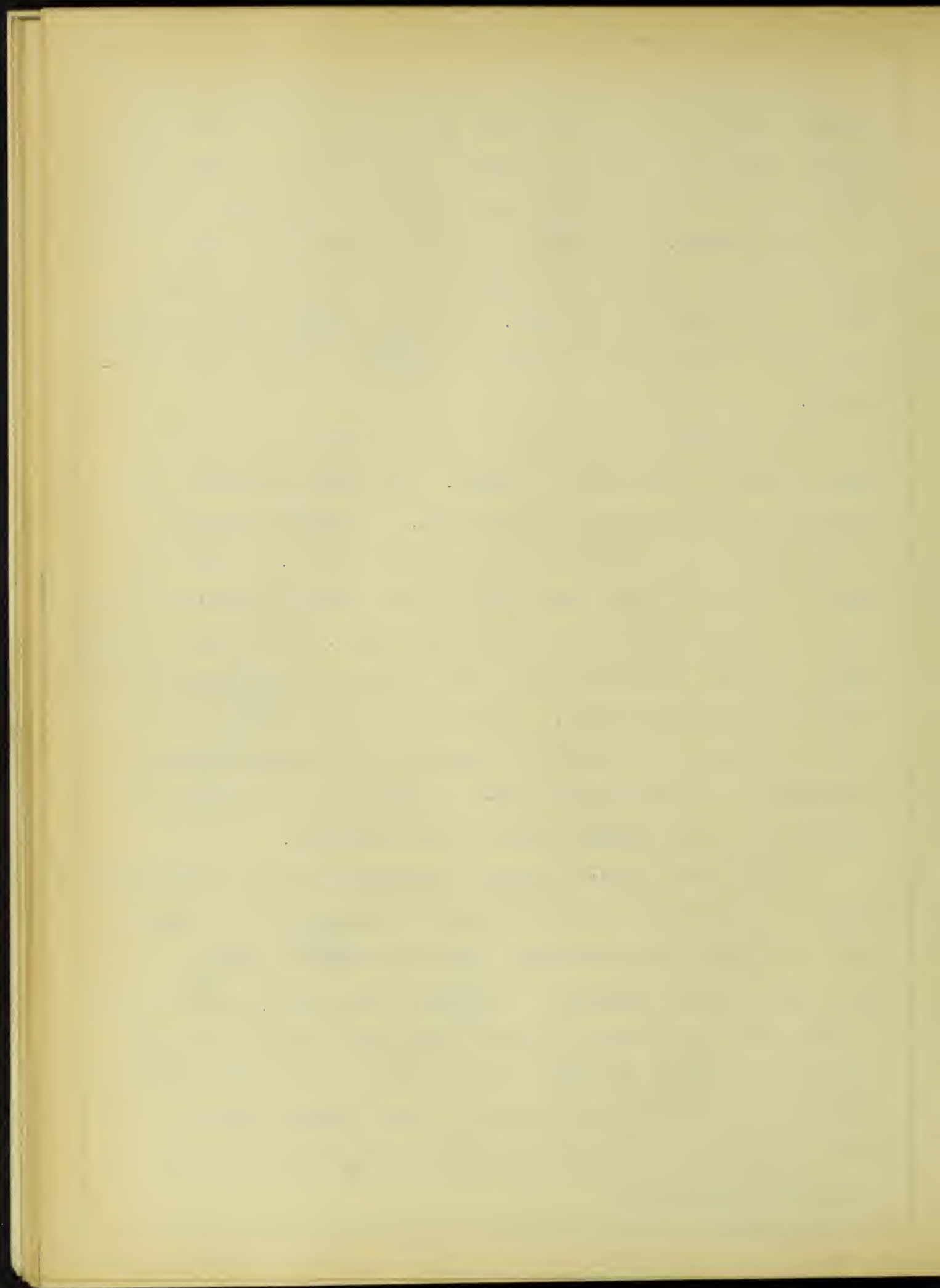




The character of the public buildings and monuments should reflect credit on its citizens and also reflect their characteristics, degree of culture and ideals. The treatment should echo the type of the people living there and their racial peculiarities to a great extent. To illustrate this it may be noted that a Venetian palace located in an Arctic city or in Northern Europe, would be extremely out of place. It would indicate that the people there were Italians and not Teutons, or that a warmer climate prevailed.

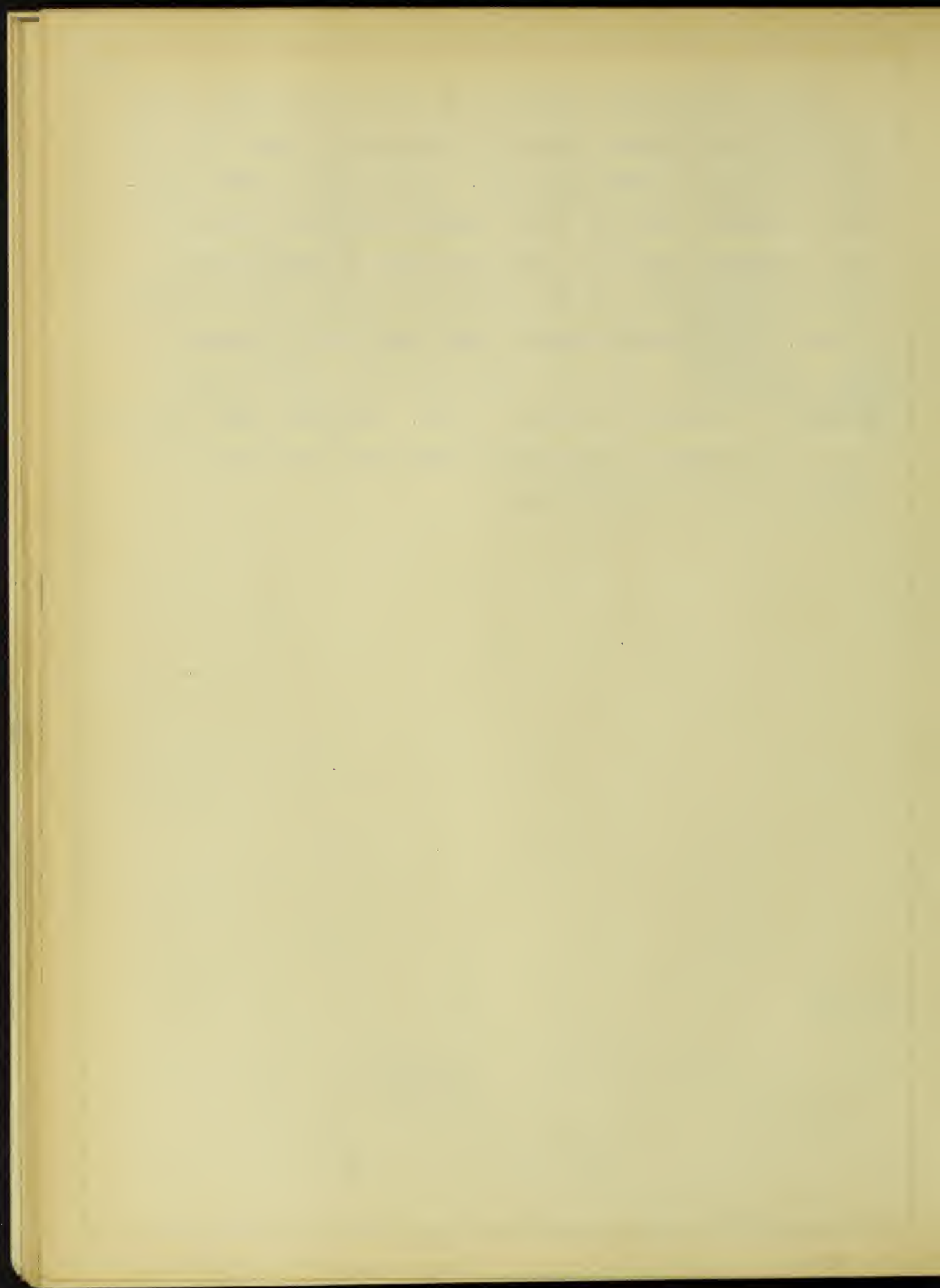
The treatment of buildings along any street in an American city can bear a great deal of change. Uniformity of height and greater attractiveness are needed badly. A variety in height needs a great deal of study to get a proper result. A limit in height of tall buildings that shut out the sunlight from the street below is an important and very desirable thing. No streets in the world are better lighted at night than the down town streets of most of our American cities. Improvement in this respect can be made in getting more attractive lamp posts or lighting fixtures. The paving of any thoroughfare where a great deal of traffic is carried should be permanent and lasting in quality.

The parks and pleasure ground reservations should show a great variety of treatment, be ample in size to accommodate the people, well distributed, and charmingly linked together by pleasure drives and stately boulevards. An ample park system, coupled with an inspiring civic center, with its attractive and well arranged collection of public buildings, formal squares, and radiating boulevards and traffic roads leading to the suburbs, makes a city that would be inviting to a visitor and efficient and inspiring to its citizens.





In the bibliography placed at the end of this thesis, there are to be found a goodly number of references to books that deal with the theory of "Town Planning". These make it hardly necessary to discuss this side of the subject, except in connection with the problem before us. They have been of unquestionable assistance in working out the details of the plan for the "Twin Cities". The following chapters will deal with this problem more specifically, giving the conditions that exist and points of interest concerning these two cities. Following that, will be a full explanation of the plan presented, with reference to the drawings, maps and illustrations.



### The Geological Conditions of the Vicinity

The upland surface of Hennepin and Ramsey Counties consists of rough moraines, among which lie many lakes. These moraines form series of irregular hills, with sharp depressions and low lands occupied by marshes and these lakes. The northern surface of Ramsey County is flat and poorly drained, forming one large swamp. There is not very much variation in the altitudes, which range from 800 to 1000 feet above sea level, with the valleys of the Mississippi and Minnesota rivers approximately 100 feet below this. The width of the deep valley below the Falls of St. Anthony varies from a couple hundred yards from the falls to Fort Snelling, to from one to two miles below this point. The falls are situated in the heart of the Minneapolis business center, giving the abundant water power amounting to 40000 utilized horse power. The perpendicular fall is approximately eighty-five feet.

From Lake Superior and extending southwest through the State of Minnesota is a broad belt of metamorphic rock, which is mainly granites and gneisses. With the exception of places near St. Cloud, Sauk Rapids, and also the Minnesota River, this rock is universally concealed by the glacial drift.

Sandstone is exposed along the shores of Lake Superior and along the Kettle, St. Croix and Snake Rivers, and at Redstone on the Minnesota River. It forms a massive ridge extending from the east to the west across the state. In another age, a succession of sandstone and magnesium limestone formed a strata





farther south and is exhibited in the bluffs of the St. Croix, Mississippi and lower Minnesota rivers.

Overlying this stone, as is exposed in the bluffs near the "Twin Cities", is the Trenton limestone about 25 to 35 feet thick. Above this are beds of shale 100 feet thick and containing thin layers of limestone. Other later deposits such as the Upper Silurian rocks, cretaceous clays, shale and lignite, are found in small quantities.

The glacial drift, left by the melting ice fields that covered the northwest, is composed of boulders, pebbles, and sand carried great distances from their original beds, and is in some places 100 to 200 feet deep. The most notable deposits of the glacial epoch are in the hills that exist throughout the greater part of the state and appear to be rounded off by the action of the ice. These are most noticeable in the eastern and central parts along the line of the terminal moraine, which forms a line from the St. Croix Lake on the east, to a point about ten miles south of St. Paul, thence northward to the lakes at the head of the Mississippi, and southward through the Leaf Hills and to Lake Minnetonka, and from thence to Albert Lea and into Iowa.

Much of the drift was washed away by the water of the melted glaciers, forming layers of gravel, sand and fine silt, in the valleys. The streams then began to diminish and seek channels, gradually cutting them deeper and deeper into the rocks and exposing former deposits.

Minneapolis and St. Paul are built mostly on a plain of modified drift of gravel, sand and clay which were deposited by the floods that were poured along the valley of the Mississippi



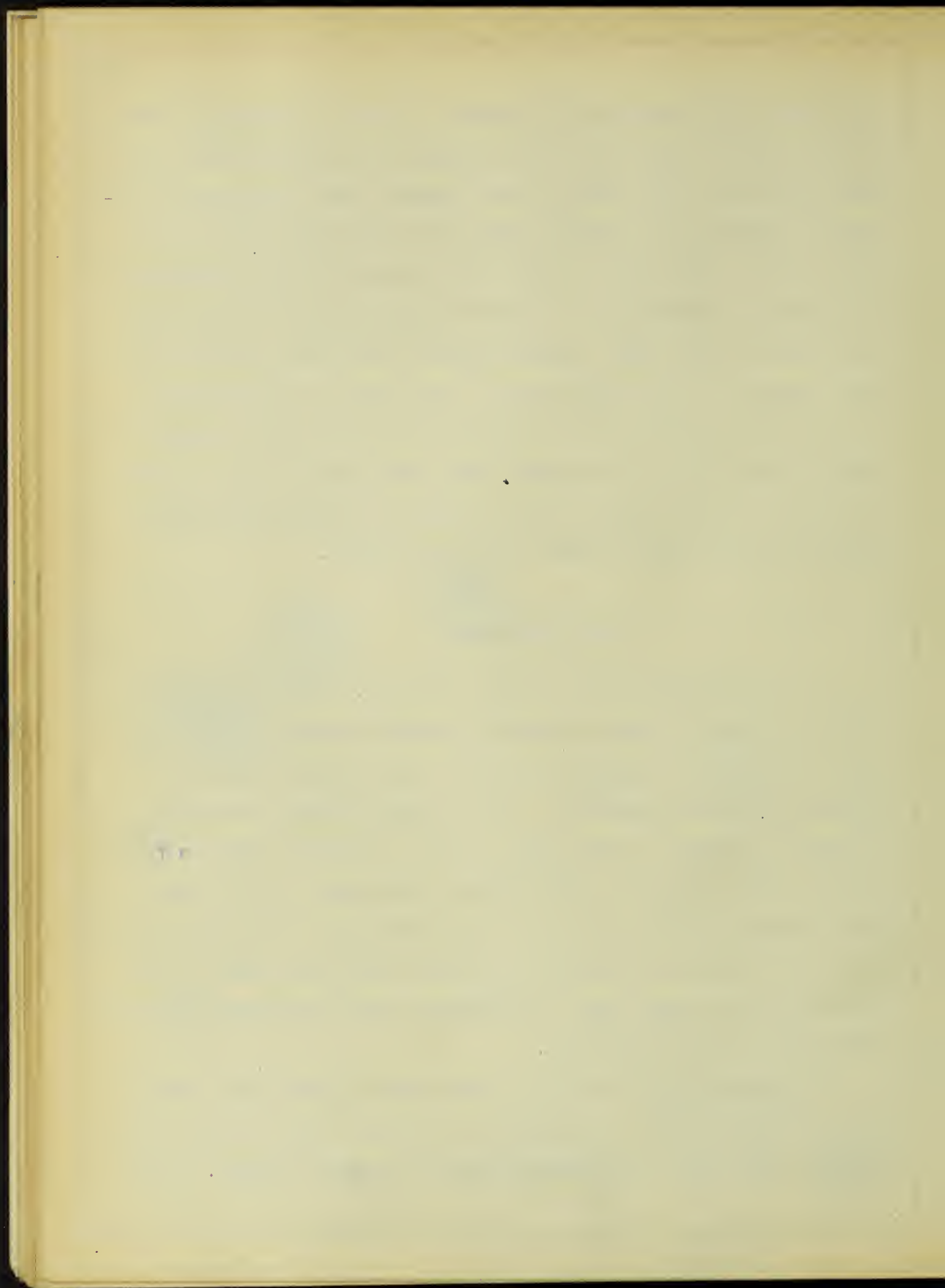


River from the retreating ice fields. It has a thickness of from 10 to 40 feet. Above this and throughout the greater part of the state there is a thin layer of very fertile soil, blackened by decaying vegetation and varying from one to about four feet thick. This forms a region that is rich and suitable for the cultivation of grains and vegetables. In the northeastern part of the state, this soil is very sandy, covered mostly with forests of pine, and when cleared is just right for the cultivation of berry bushes. The fine grass fields of the southern part of the state supply food for the cattle of the great dairy industries of that region. The production of flour and dairy products has given the name to Minnesota as the great "Bread and Butter State".

#### The Water Supply

In the government Water Supply paper No. 256, of the United States Geological Survey, there is a careful report of the water supply conditions in southern Minnesota and includes that of Hennepin and Ramsey Counties. The sources of supply are varied and may be classed as from lakes, streams, springs, water in the glacial drift and in the water bearing sandstone. In all the river valleys and up to the level approximately of 740 feet above sea level, the water from wells will flow above the level of the ground. On the upper plain, it remains a short distance below the surface and must be pumped up.

The use of lake water has to some extent lowered the level of the lakes, and this diminished their size. This is true also of the streams that are drawn on heavily for water supply. This



makes these sources of supply uncertain. The principal supply of this sort is the Mississippi River. The quality of the lake water is fairly good, but that of the river water, due to contamination, is dangerous, unless made pure by artificial processes.

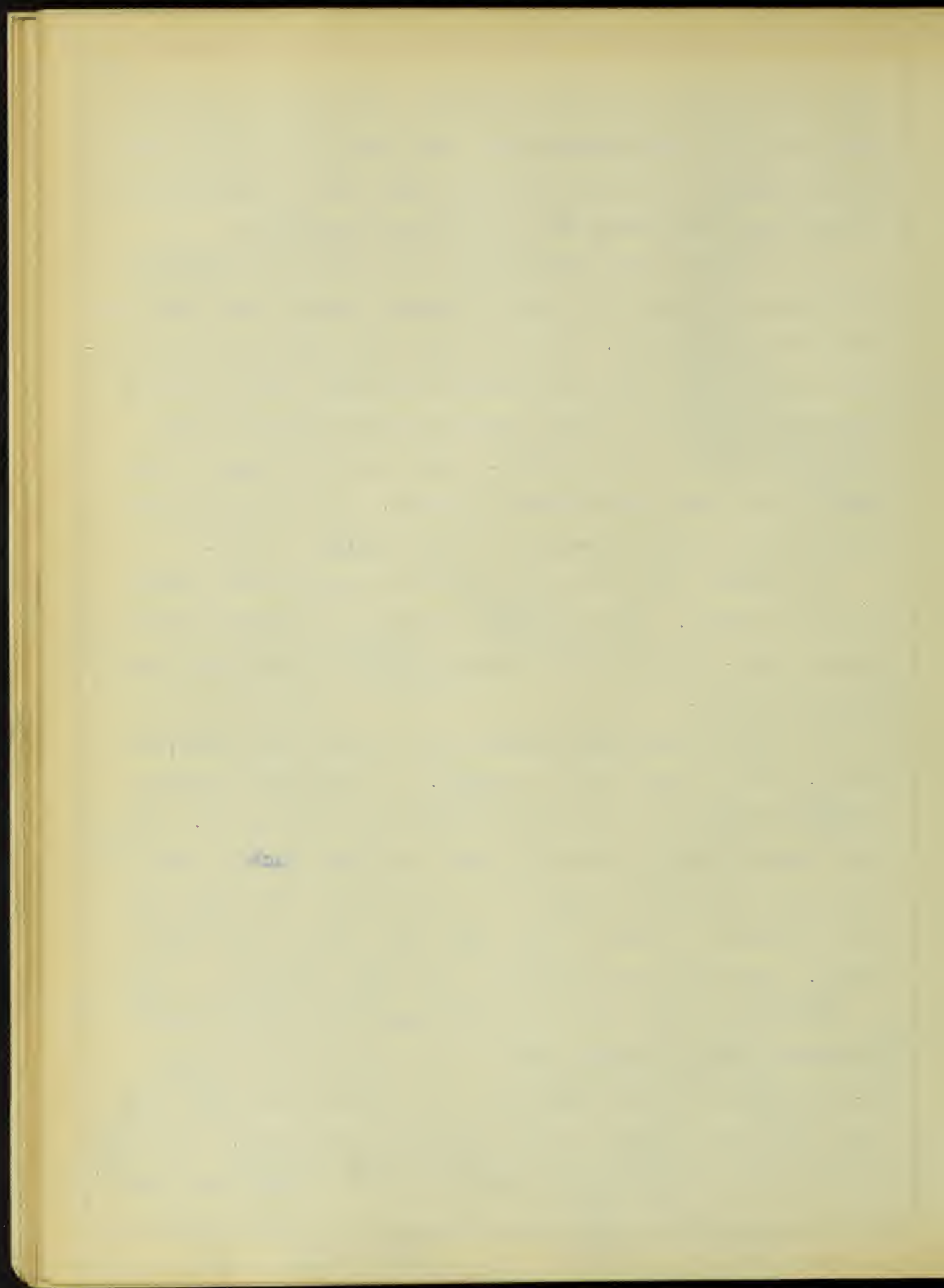
In the gorge of the Mississippi, and in the low places near the lakes, and along other streams, numerous springs issue from the ground and valley walls. These are used very extensively for drinking water, but are liable to contamination within the more thickly populated parts of the cities. Many of these springs feed the lakes and streams in the vicinity. This source of supply is very insufficient, except for drinking purposes. As to quality, it is a good mineral water, containing a large quantity of iron.

The glacial drift gives the principal drinking water supply of the two cities. Wells are sunk and water is obtained with the greatest ease. Contamination, however, is fast making this supply fall into disuse.

The three strong water-bearing sandstones, in the region, are the St. Peter, Jordan and the Diesbach. All three give copious supplies of water and are reached by drilling through rock. The first named is heavily drawn on, being the first reached. The others give far greater supply. It has been said that under the cities there is a stream of this water fully equal to the river supply. The quality of this water is the best possible.

The two greatest sources of water power close at hand are St. Anthony Falls, already spoken of, and Taylor Falls in the St. Croix River north of Stillwater. The other streams that flow into these rivers below the falls all have a water fall. The drop of these, ranges from 80 feet to about 40 feet in height, and they





fall into rather narrow rock cut glens, which widen and join the wider channels of the large rivers.

### Building Materials in the Vicinity

In the vicinity of St. Paul and Minneapolis there are plentiful supplies of stone, gravel, sand and clay. Within the city limits in places this is also true. The cities are built, for the most part, on a sand and gravel foundation, but along the Mississippi River and in the northeastern part of Minneapolis, as well as the southeastern section of St. Paul, limestone outcrops near enough to the surface to be quarried or is entirely exposed. Within a radius of 100 miles there are rich deposits of high class stone. This includes such places as St. Cloud, Ortonville, Kettle River, Kasota and Mankato.

#### (a) Stone

Minnesota is well supplied with granite. At St. Cloud and Ortonville are the principal areas. Three kinds are quarried at St. Cloud; a pinkish-gray medium-grained stone, a gray quartzose syenite, and a coarse grained pinkish gray stone, besides a little fine-grained syenite and a red syenite. A dark-red coarse grained granite is quarried at Ortonville. A fine grained and flint like stone is found near the South Dakota border and also in that state. This is called Jasper stone and comes in bright pink or purplish red color.

At Sandstone on the Kettle River there are large quarries of sandstone. The rock is a fine grained, light pink or salmon colored stone, hard and durable, and with sharp, sparkling sand grains. A soft dark brown sandstone is found near Duluth.





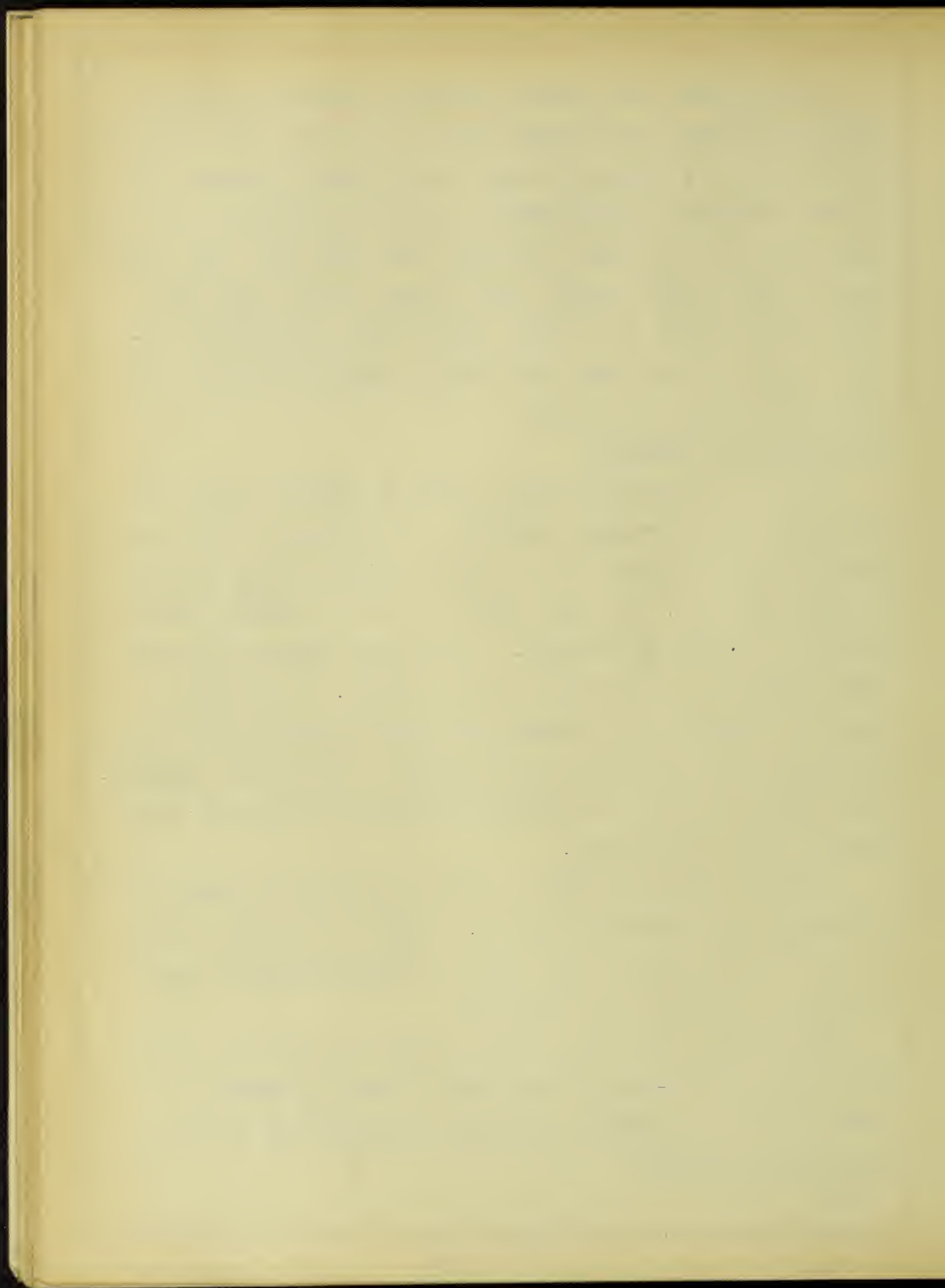
A high grade, fine grained, magnesium limestone is found at Kasota and Mankato. The Mankato stone is of a buff color and that at Kasota is of a light pink shade faintly banded in places. The Trenton limestone, a local deposit, is used to a certain extent for dimension stone, but mostly for rubble and range work. This consists of beds of high calcium, fine grained, dense, light gray rock; beds of bluish to greenish, argillaceous, magnesian, limestone; beds of bluish gray, wavy bedded, subcrystalline; and beds that approach shale in texture.

(b) Material for Concrete

There is a plentiful supply of sand and granite within the city limits and surrounding territory. A great part of the cities are built on sand deposits and the hills contain a large quantity of gravel and sand. The sand, however, is not of uniform quality and must be washed and screened. It is mainly round in shape and lime carbonate, mica and magnetite are present.. It is mostly quartz, but contains some feldspar and other crystalline materials. The gravel, found, ranges from small pebbles to cobbles and boulders. It is composed largely of dolomite with pebbles of granite, gabbro, gneiss, chert and sandstone.

Crushed Trenton limestone is used a great deal for concrete, and makes a very excellent material. A great deal of this stone is only fit to be used in this form. A crushed quartzite stone is quarried at New Ulm and shipped in.

The nearest point where Portland Cement is found is at Mason City, Iowa. The so-called "brick-layers" cement or hydraulic cement, is found at Mankato and Austin, Minnesota and is used a great deal in masonry.



### (c) Clay Products

Common brick is made in large quantities in the "Twin Cities", and neighboring towns of Chaska and Coon Creek, Minnesota, and Menominee, Wisconsin. The local firms and those at Chaska use a blue calcareous clay deposited in the river valleys. The bricks are cream colored and are used a great deal for backing. At Coon Creek a slightly calcareous brown glacial clay is used, and light red to dark brown pavers and building bricks are made.

Face brick is made by local concerns and by those at Menominee. The local brick is made from Trenton, blue clay shale, and are colored light yellow, gray, greenish, red and brown. The Menominee brick is of various shades of brown and red.

Hollow, fire-proof brick and tile are manufactured locally and at Chaska and Princeton, Minnesota. This is used for partitions, arches, roofs, floors, and for columns and girder coverings.

### (d) Materials for Mortar and Plaster

The nearest gypsum mines are at Fort Dodge, Iowa, where all standard brands of wall plasters are manufactured.

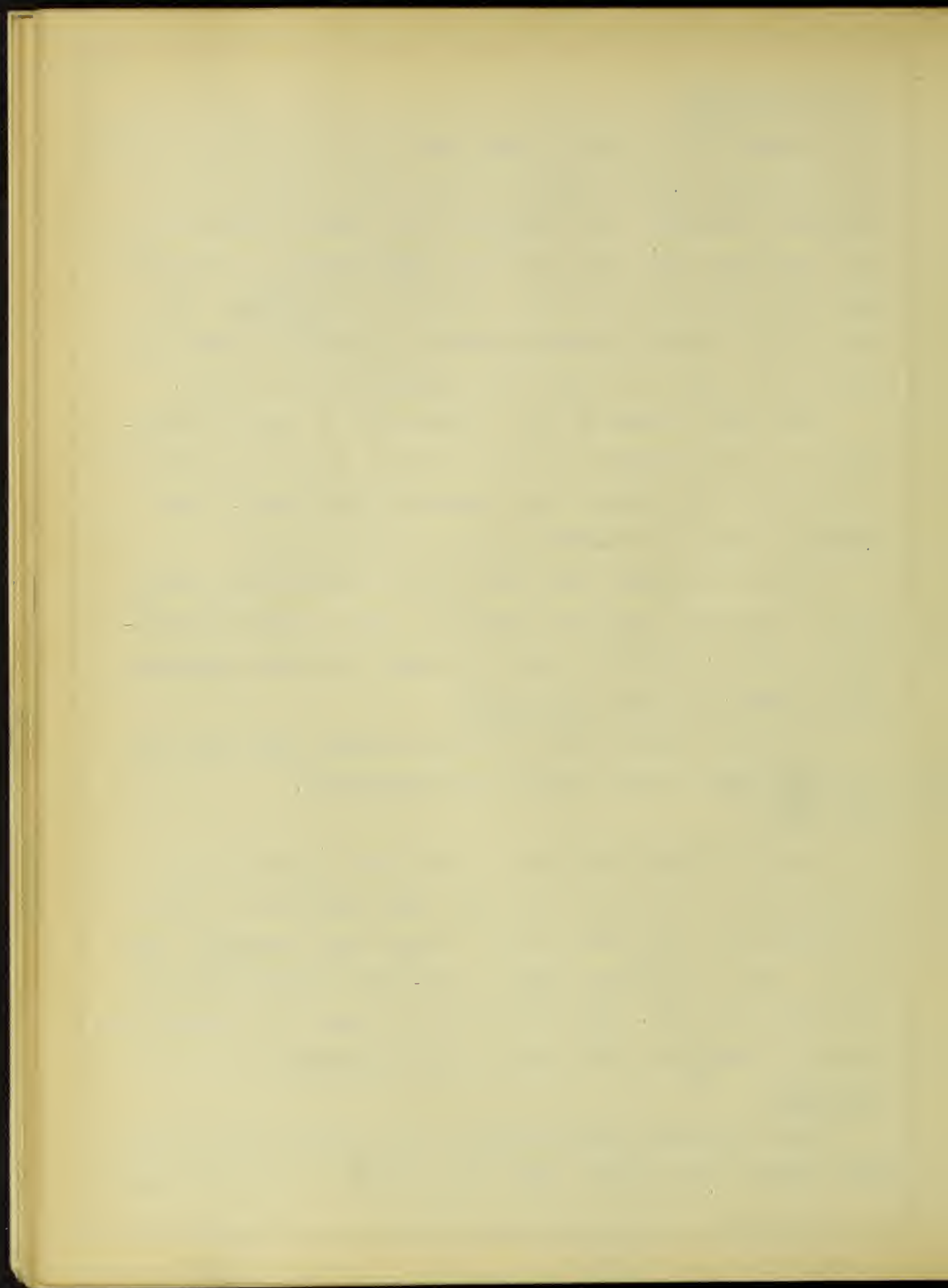
### (e) Metals

From the richest iron mines in the world situated in the northern part of the state, there are large quantities of iron ore shipped into the "Twin Cities". Large local foundries turn out all forms of structural steel, cast-iron, wrought-iron, and ornamental iron work. Other metals such as copper and manufactured brass and bronze are also worked in these foundries.

### (f) Lumber

White and Norway pine are found in the northern third of the state north of the cities. That part tributary to the Mississippi





River and Minneapolis is being largely cut off. Some hard woods, such as oak, ash, birch, and maple are also found in the vicinity, especially in western Wisconsin. Washington fur is brought in from the west and used a great deal as a building material. Minneapolis has led the world for many years as the great lumber producing point.

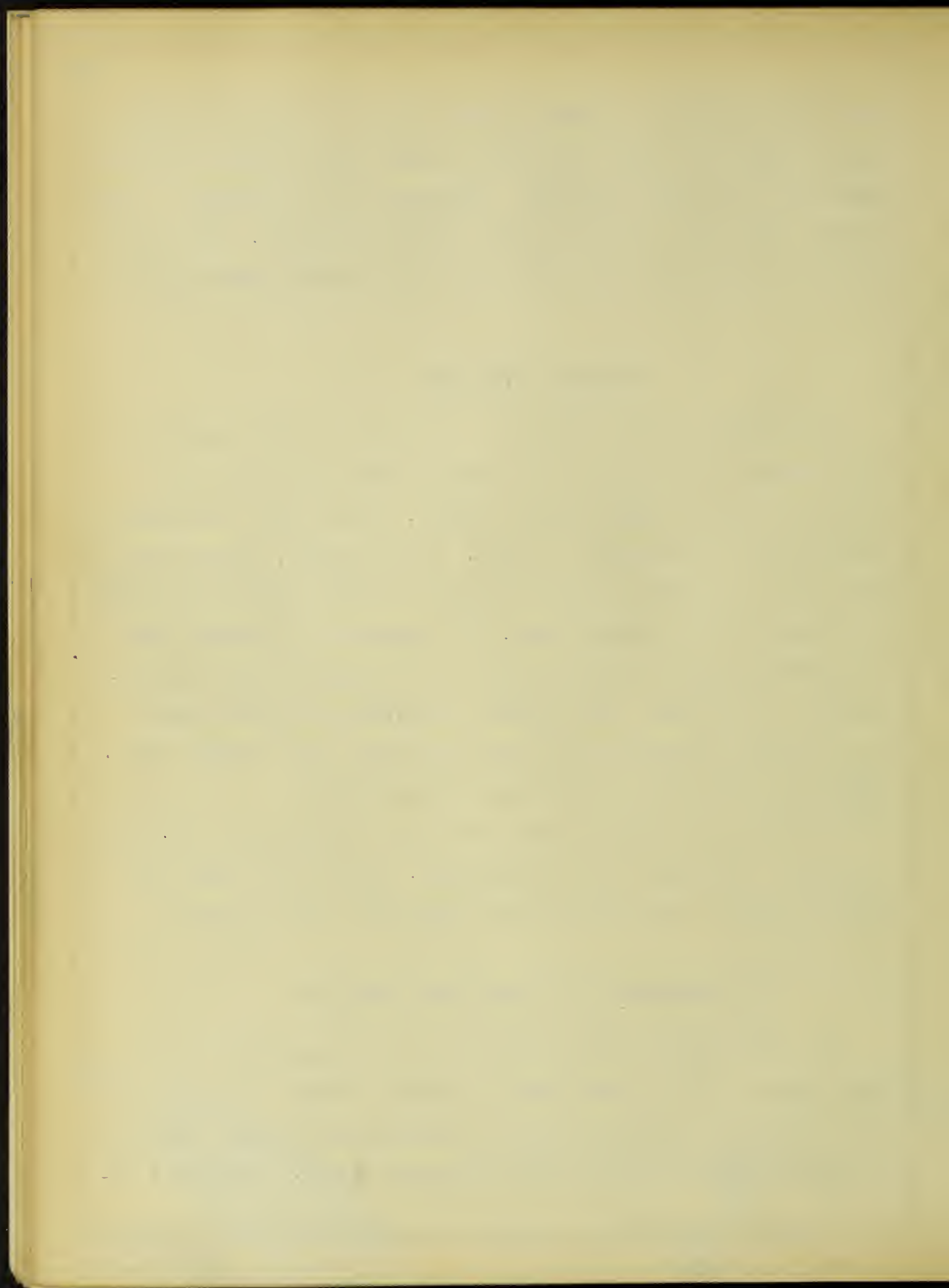
### Climatic Conditions

The climate in the state may be said to be rather severe. A dry atmosphere is enjoyed in the winters which are usually uniformly cold with a good average snowfall. Snow covers the ground continuously from November to March. In the spring, summer and fall there are usually copious rains, but nothing approximating the wet seasons of the Pacific Coast. The temperature averages about 40 degrees, during the winter half, and 70 degrees during the summer half of the year. The extremes range from 35 degrees below to 100 degrees above zero (in a few instances). As a whole, the climate is undeniably healthful and invigorating.

The prevailing winds during the winter are from the northwest, and during the summer from the southwest. Most of the winds are from the north, south and west, and but little from the east.

### The Geographical or Commercial Situation

The "Twin Cities" are situated in a most advantageous place with regard to their access from the outside world, outlet to other places and relation to other centers of population. They are at the head of navigation of the Mississippi River. Government im-





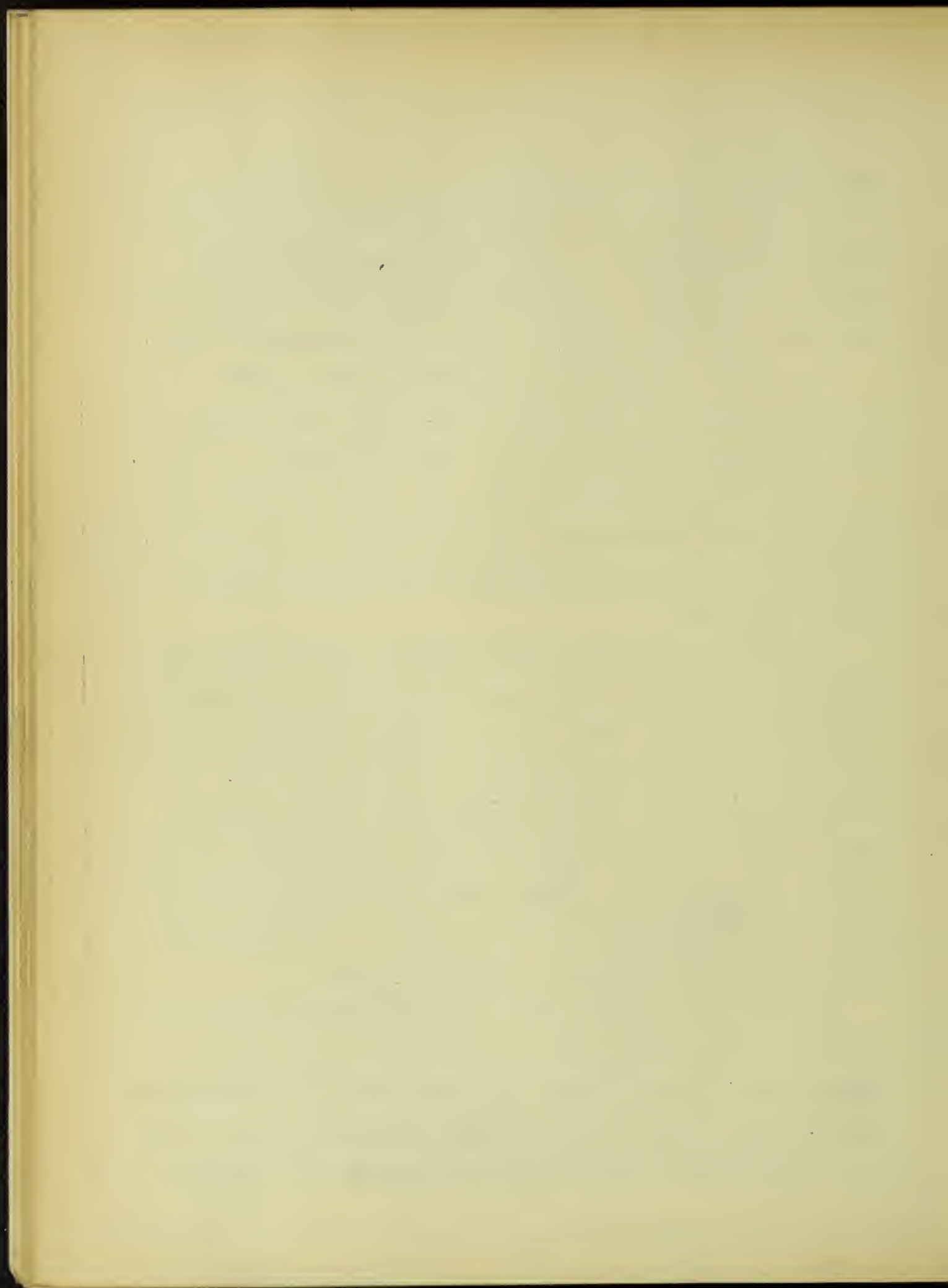
provement of the upper Mississippi is being urged which will allow the largest river steamers from New Orleans to reach the cities. The opening of the Panama Canal will give greater value to the use of the river for commercial purposes, and this in turn will add greatly to the importance of the "Twin Cities" as commercial centers. A dam with a lock is being erected in the river between them which will allow steamers to reach the Minneapolis center.

St. Anthony Falls, with its incomparable water-power, forms a barrier to navigation above the cities. This fall furnishes the power that runs the flour mills for which Minneapolis is famous.

With regard to the Great Lakes, the cities are within 150 miles of Duluth and Superior, two large ports on Lake Superior. From these there is a great amount of lake commerce carried on bound for the east.

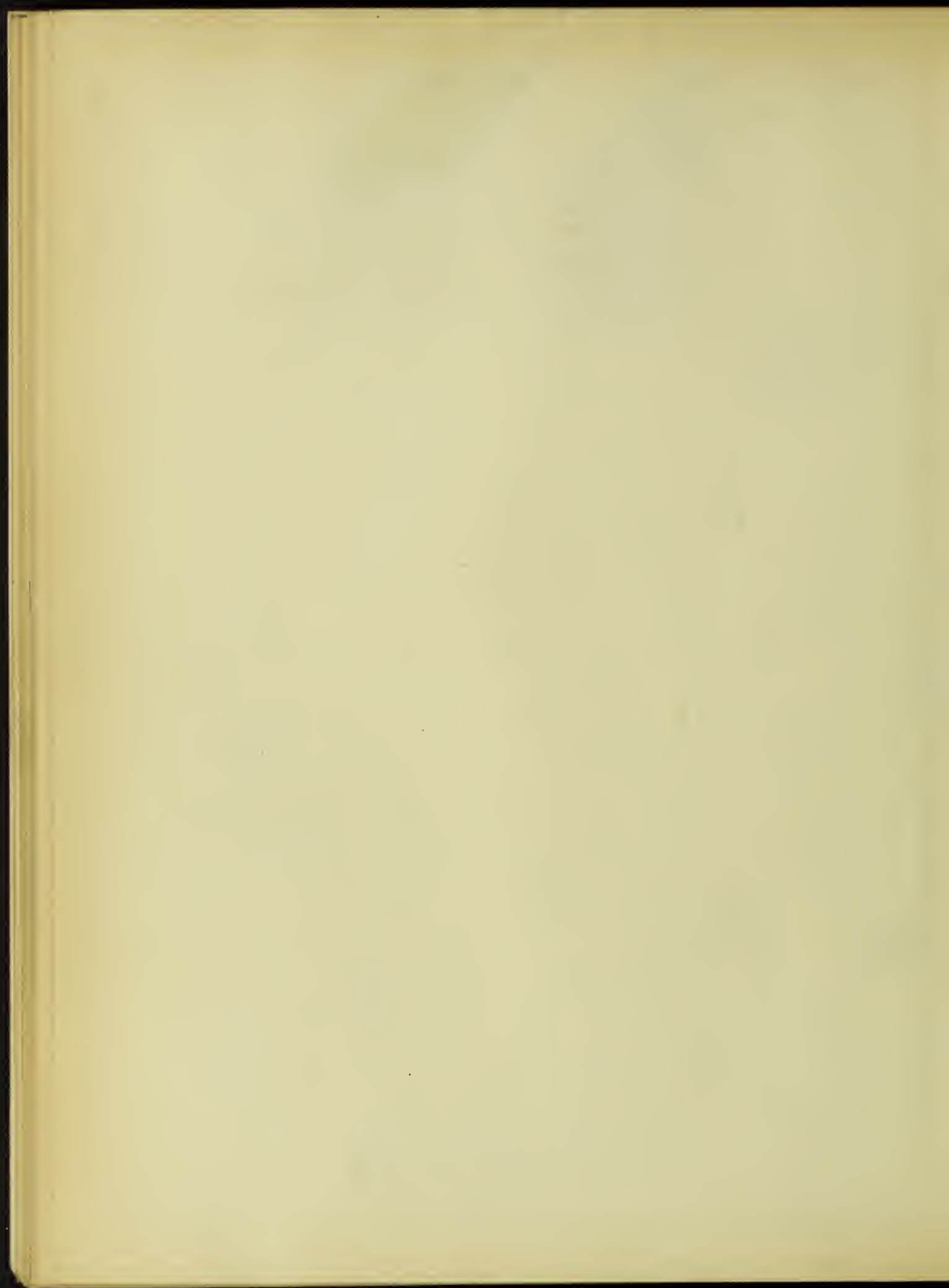
The relation of these centers, ("Twin Cities") with other centers of population, is one that clearly shows the wonderfully isolation they enjoy. They are practically independent of the influence of the other large centers in the middle west. The nearest city that has a greater population than the combined "Twin Cities" is Chicago, about 410 miles away by rail. With the exception of possibly St. Louis, Missouri, they form the largest center west of Chicago. This gives an idea of their relative size in comparison with other neighboring places.

They form the logical center and distributing point for the entire northwest, west as far as the rockies, east to the Great Lakes, south to Iowa and north into the greater part of western Canada. Other growing centers in this region are Duluth, Minnesota, Fargo, North Dakota, Spokane, Washington, and Winnipeg,



Manitoba, but all are a great deal smaller and greatly dependent upon the "Twin Cities".

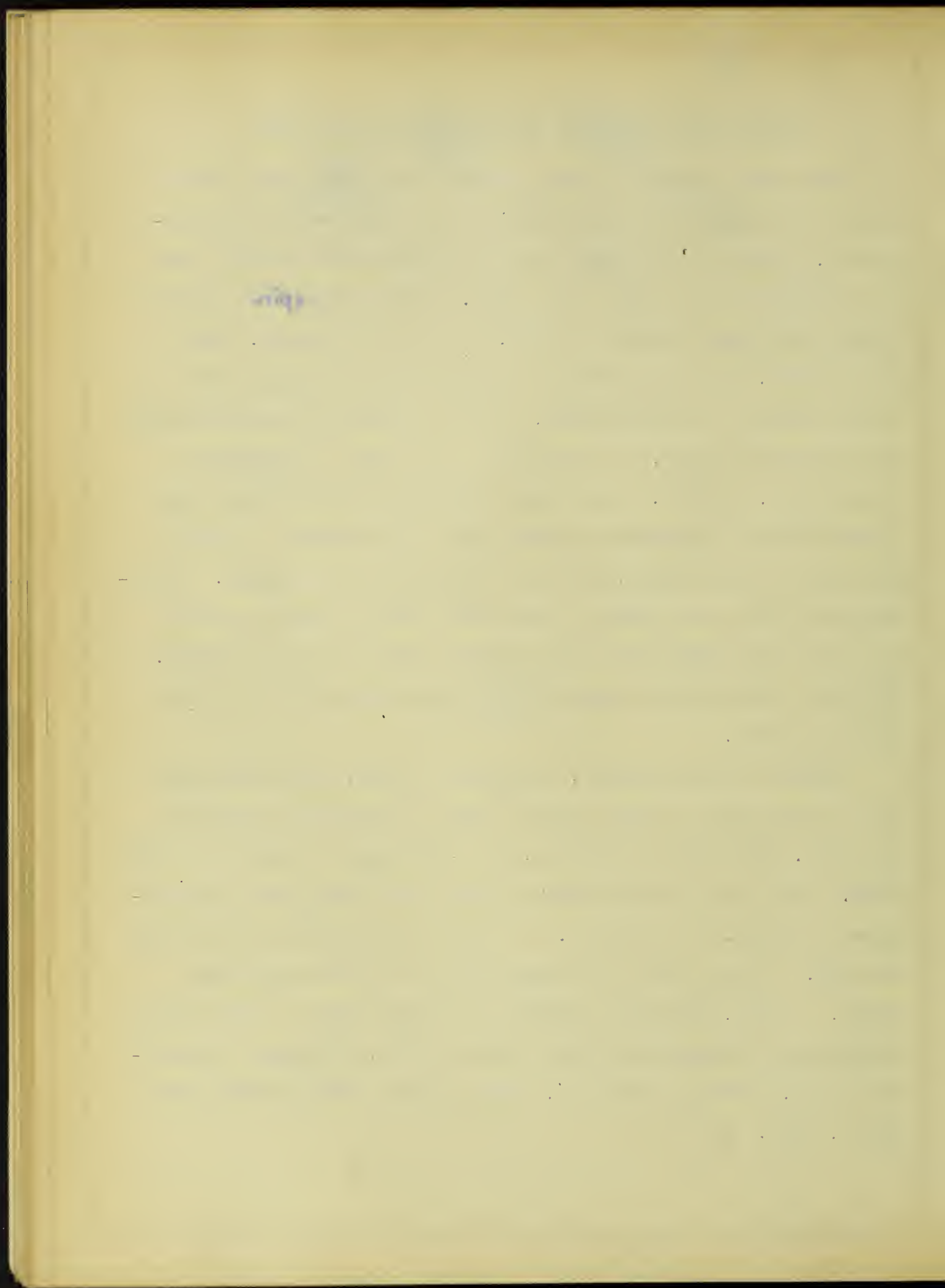




### History and Growth of Minneapolis and St. Paul

The region around the "Twin Cities" was first known as "the land of the Dakotas", in the early days of discovery and exploration. The first discovery was made by Nicollet in 1640, and he was followed by others soon after. Father Hennepin was the first white man to reach the site, by way of the river. That was in 1680. No very extensive immigration took place until the establishment of Fort Snelling, at the junction of the Mississippi and Minnesota Rivers, by Lieutenant Z. M. Pike, of the United States Army, in 1805. The traders were the first settlers and these carried on extensive trading with the Indians. In 1819 Fort Snelling was built, and made a strong Indian outpost. Thereafter settlers, the first of which were Swiss, began to arrive in increasing numbers and take out land claims in the vicinity. In 1849, Minnesota was organized as a territory, with St. Paul as the capitol.

Reverend Lucian Galtier, A Catholic Priest, who visited the upper Mississippi in 1840, has the honor of naming the city of St. Paul. From about that date, the city began to grow at a rapid rate. The trade on the river, and with the Indian, was the principal business, at that time. In 1849 the population of St. Paul was 200. At the time of the admission of the State into the Union, in 1858, this had increased to 10000 people. After a few unsuccessful attempts in 1858, 1861 and 1872, to change the capitol to St. Anthony, and to St. Peter, it was firmly established at St. Paul.





Many years before the settlement of Minneapolis was assured, far-seeing men read its future in the Falls of St. Anthony. The waterfall became a vital element in her greatness. Franklin Steele was the first settler to take out a land claim near there.

This was in 1838. Minneapolis had a dual origin. The present city embraces not only the part on the west side of the river, but also the former city of St. Anthony. The latter was the first to be settled, but the former grew more rapidly. The first saw-mill was erected on the east side in 1848. The population of St. Anthony in this year was about 300, and it was also named as the seat for the State University, at the same time. The growth of the place was steady and substantial, until its union with Minneapolis in 1872.

Minneapolis was built up on land that was originally included in the Government reservation. The first pioneer of the community was Col. J. H. Stevens, who arrived in 1849, and settled in St. Anthony. He soon established himself on the west side of the river. The reduction of the reservation, caused a great increase of the population, and opened a way for the speedy upgrowth of the new city. In 1857 the population had reached over 2000. The city was incorporated in 1858, and from that time on its growth was phenomenal. After the union with St. Anthony, it took its place among the large cities of the country. In 1850 the population was about 6000 and in 1880, it had increased to 47000. The name "Minneapolis" is derived from the Dakota, "Minne", (water) and the Greek "polis", (city).

These settlements had their part to play in the Civil War.



Eleven regiments of volunteers were furnished from the State, and all were actively engaged in the different campaigns, and gave brave and admirable service.

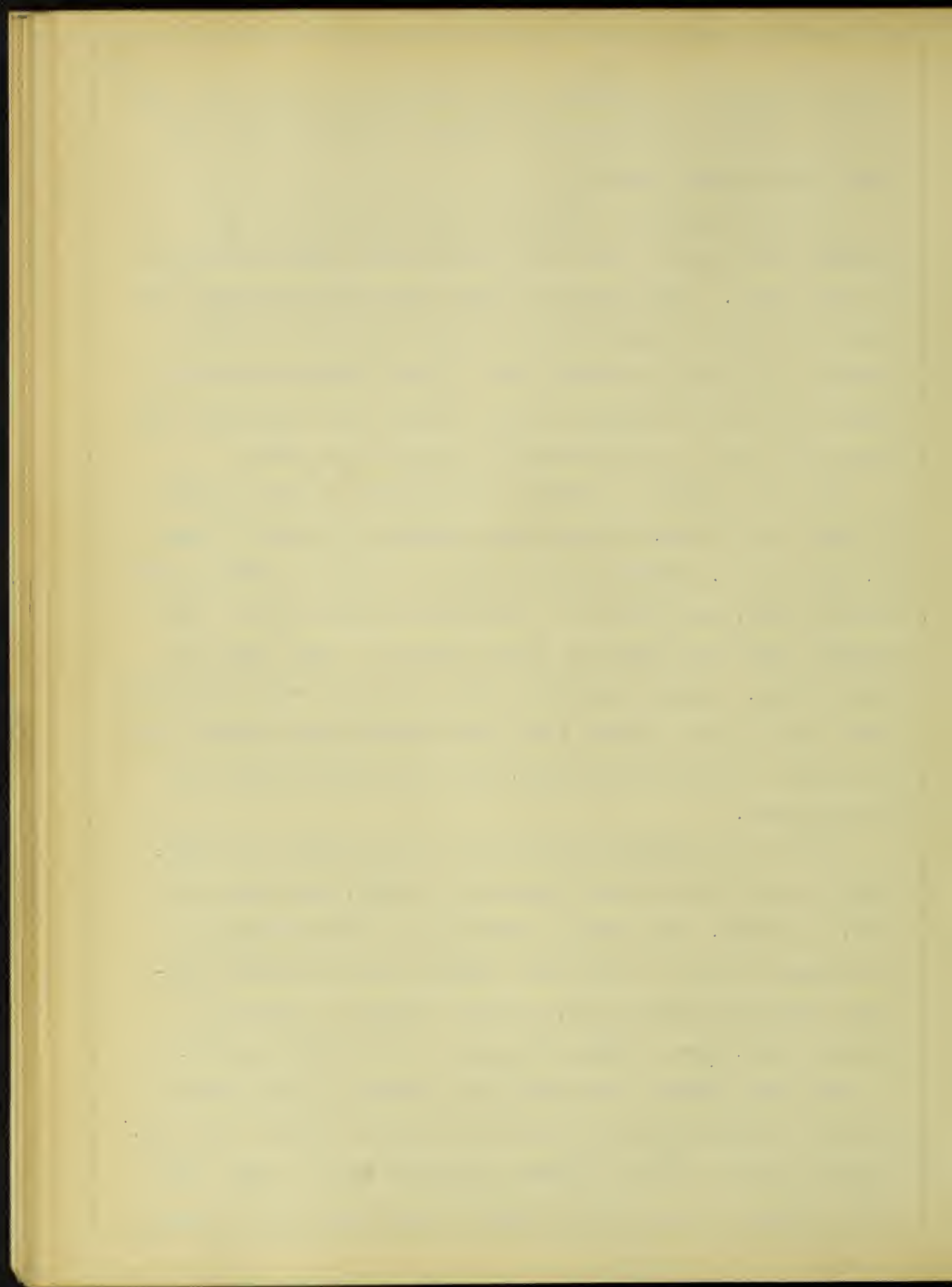
The "Sioux Massacre" occurred in 1862, which for a time eclipsed the horror of the Civil War, and held back immigration to some extent. The Sioux were finally decisively defeated, and driven westward to reservations, or made prisoners, entirely crushing the power of the "Red Men". These Indians left behind them an interesting history and many legends and traditions, that have added color to the historical setting of the place.

The first railway to operate in Minnesota, was that of the St. Paul and Pacific, now the Great Northern, in 1862, between St. Paul and St. Anthony; and the first to reach the "Twin Cities" from the east, was that of the Chicago, Milwaukee and St. Paul Railway, about the same time, which entered St. Paul along the river valley. Railway operations were carried on very extensively after the Civil War and the two cities rapidly became great railway centers, manufacturing towns, and distributing points for the northwest.

In 1860, the combined populations of both cities was 16128. Twenty years later this had increased to 88385, and again, in 1900, to 365783. The present population of both according to the census in 1910 is 516152 and together with the smaller outlying towns surrounding them, within a radius of twelve or fifteen miles, form a large metropolis of over 550000 people.

The "Twin Cities" have become the terminal for five great pacific railways, the Great Northern, Northern Pacific, Soo Line, Canadian Pacific and the Chicago, Milwaukee and St. Paul. Nine great railway systems afford transportation facilities for them,



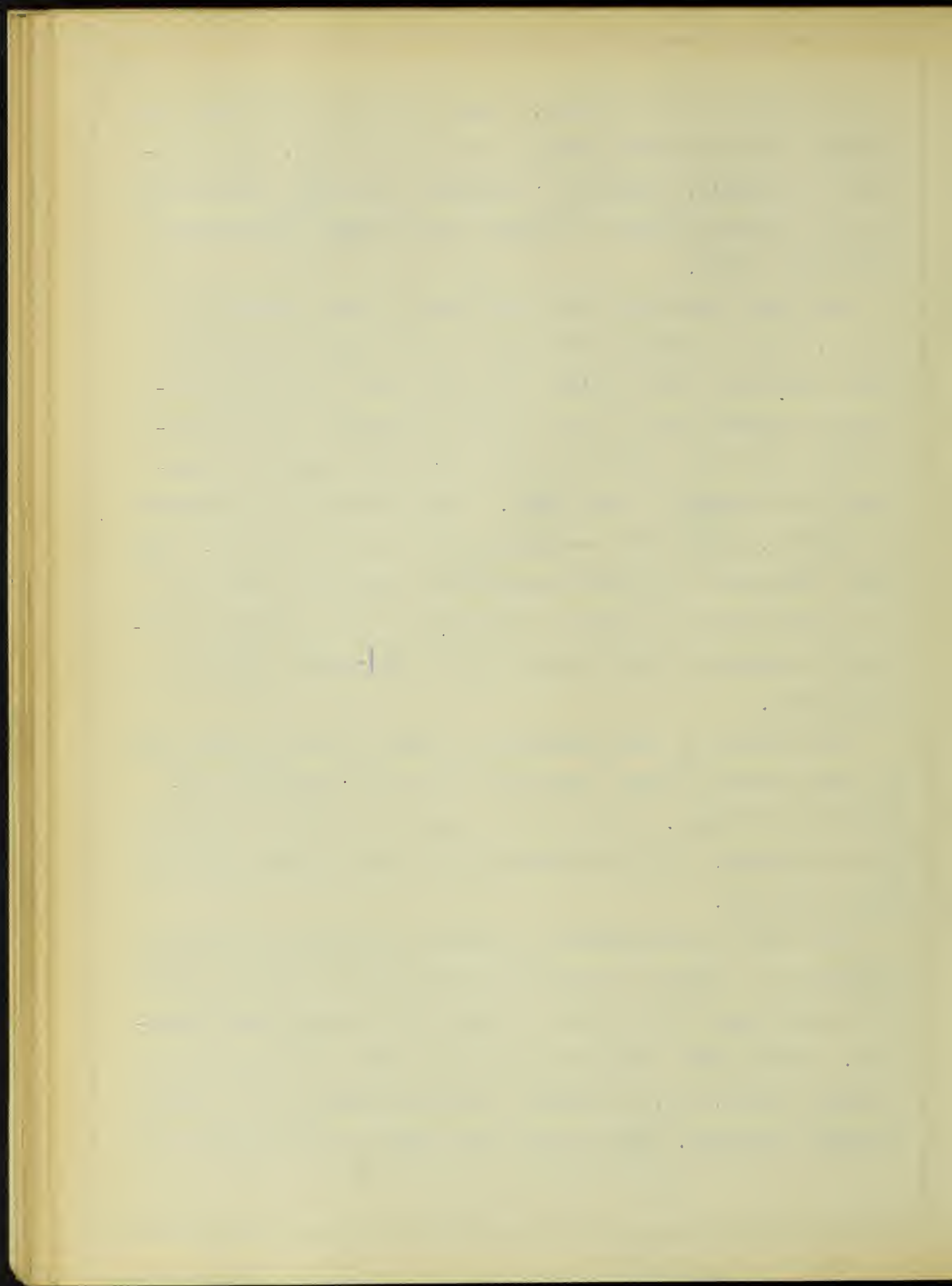


to all points of the continent. Seven railways connect them with Chicago, and with eastern roads, from that point on. Every section of Wisconsin, Minnesota, the Dakotas, Nebraska, and Montana, and the principal points in Canada, are in direct communication with these cities.

The great industries that have helped to make Minneapolis and St. Paul as famous as they are, are the lumber production; grain handling; flour milling; iron works, with the rapidly increasing manufacturing of farm and mill machinery, building materials, and tools; furniture; boots and shoes; wagons and carriages; and woolen and knit goods. These represent an investment of over \$250,000,000, and the employment of over 50,000 men. Many other industries are rapidly establishing themselves there, and it is predicted that, with the extensive and rich tributary country, the cities will soon become one of the largest centers in the country.

The majority of the immigration to these cities has been, and is, from northern Europe, especially from the Scandinavian peninsula and Germany. This gives an idea of the class of people, that live there, and their natural health, high ideals, and high moral standards.

The center of Minneapolis is generally conceded to be Bridge Square, at the junction of Hennepin and Nicollet Avenues, through the actual center of business is moving in a southeastward direction. In St. Paul, the center is at the corner of 7th and Robert Streets; but it, too, is showing a decided movement in the northwestward direction. These indications point to the tendency for

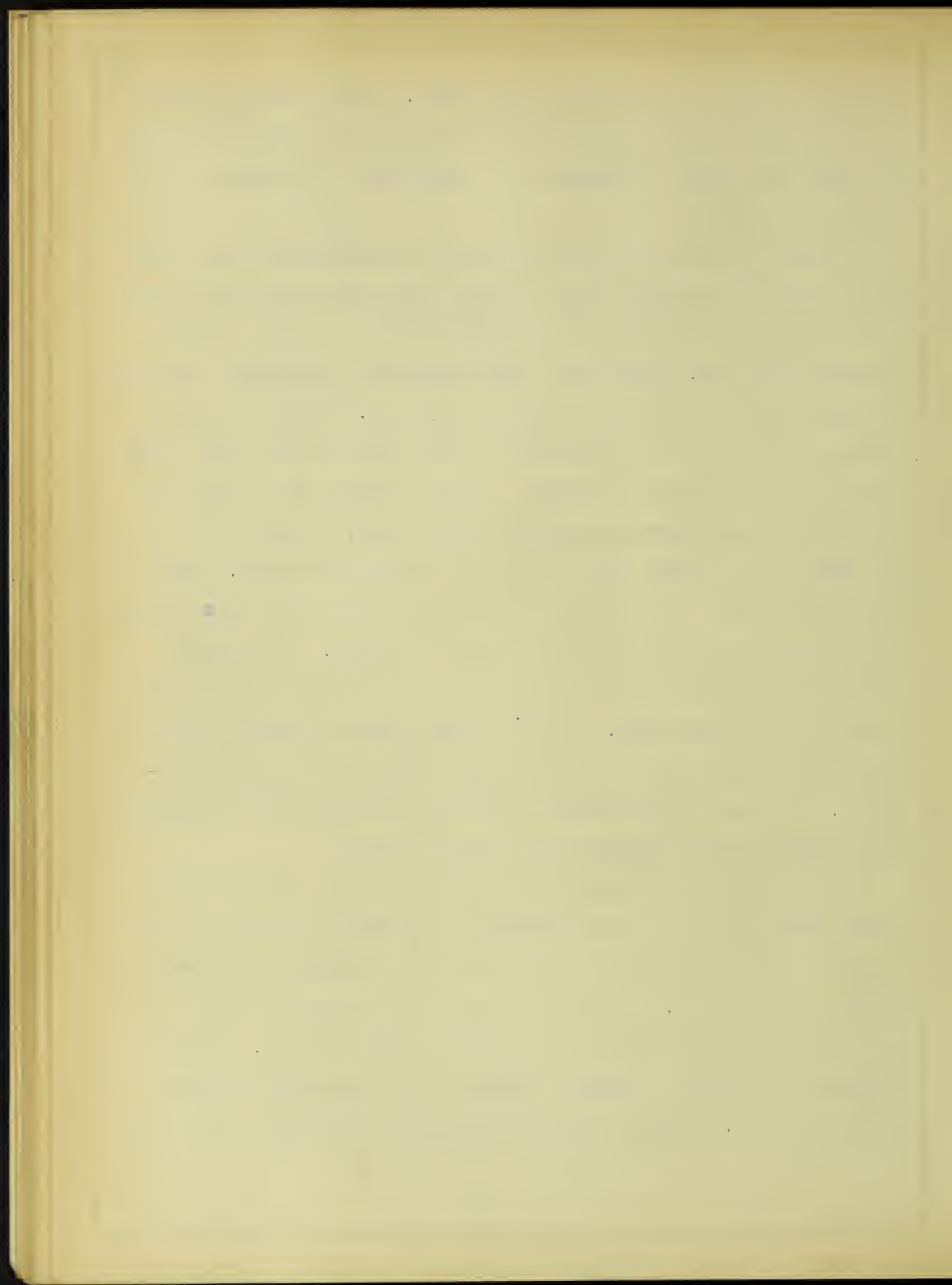




the two cities to grow towards each other. A new midway district, located about halfway between the two cities, is rapidly becoming an important place of business, and enjoys many advantages, that give it permanence.

A short review of the park development and schemes that have been offered to beautify these cities, will give an insight into the enterprise, generosity and foresightedness of their public spirited citizens. Nature has been generous in creating a charming setting, that can hardly be equaled elsewhere. Within the city limits of St. Paul and Minneapolis, there are fourteen lakes with a shore line of almost 30 miles. Within a radius of 25 miles of the city limits, there are over 100 more lakes, as beautiful as those in the famous lake district of northern England. Lake Minnetonka, one of the largest and most characteristic, has a very irregular shore line of over 120 miles in length. The wooded hills and rocky bluffs along the Mississippi add great charm and variety to the landscape. There are many glens, formed by the receding streams, that fall into them, forming attractive waterfalls. The surrounding country is thickly wooded; and is watered by numerous flowing streams and matured springs.

Starting with a few small and isolated parks, the St. Paul people have gradually been awakened to the realization that their city has been blest with this unusual natural beauty, and have made good use of it. Como Park is well known as one of the most notable artificially created parks in the country. Indian Mounds Park affords a wonderful view of the Mississippi valley below the city. Other parks, bordering beautiful lakes, and a



recently planned extension system of boulevards along the river and surrounding the city, has brought their parks system to one of the first class.

The people of Minneapolis have not been slow at all in discovering their natural wealth, saving, and developing it. In the southwestern part of the city, there is a charming group of lakes, which form one great natural park. These have been linked together to allow boats to pass from one to another. They are connected to the southeastern corner by a boulevard along the Minnehaha Creek, which forms the famous Minnehaha Falls and Glen near the river. A continuous line of boulevards already extend from Central Park, in the center of the city, out around these lakes, and across the city to Minnehaha, and thence up the Mississippi River bank to the University. A boulevard, completely surrounding the city, is being planned and land acquired for the same.

A number of points of interest in Minneapolis that give character to the city and have been considerably developed are, the University of Minnesota Campus, the parks around the lakes, Minnehaha Park and Fort Snelling. The vicinity of the Minneapolis reservoirs, the lumber district, St. Anthony Falls and river banks, Bridge Square, Minneapolis Civic Center, the State Soldiers Home, and Glenwood Park are points that need a great deal of further development. In St. Paul, the first is true of the Indian Mounds Park; Lake Phalen; Como Park; State Agricultural grounds, and those of Macalester, and St. Thomas Colleges, and Hamlin University;

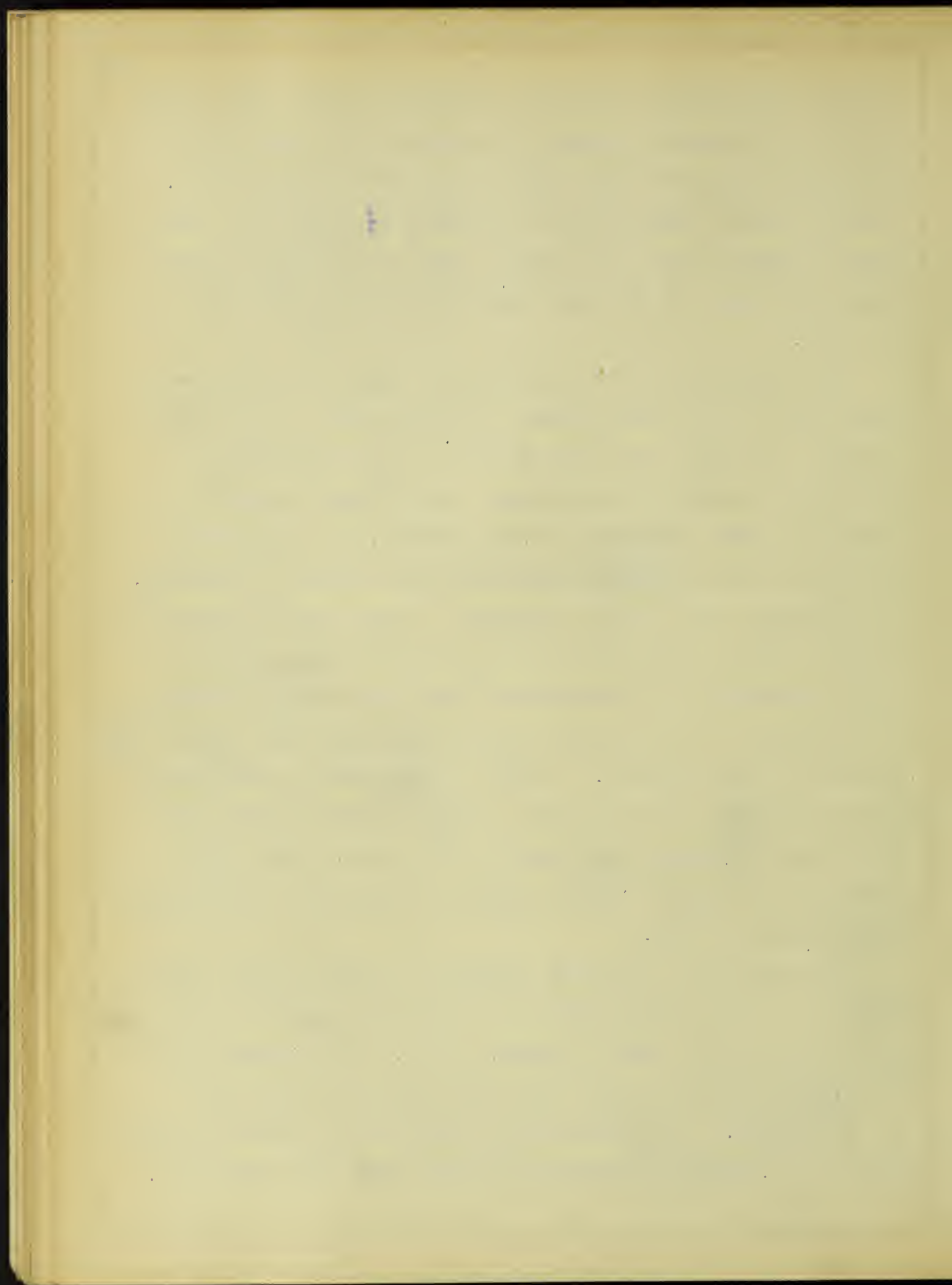




the St. Paul residence district; and Harriet Island. The second is true of the capitol grounds and approaches the river front, the region around the water supply source, and the State Fair. Outside the city limits there are a number of places that need better connection with the cities. These are Lake Minnetonka, White Bear Lake, and the lower Mississippi River valley near Red Rock.

Many noteworthy efforts have already been made towards civic improvement in the "Twin Cities", on large scales. In St. Paul a number of schemes have been offered for the improvement of the Capitol grounds and approaches. Among these, is one of special interest, offered by Mr. Cass Gilbert, the Architect of the Capitol, which includes spacious grounds around the building, a boulevard to the Catholic Cathedral, a large central approach, directly south to Seven Corners, and an interesting group of state buildings in the southeastern direction, arranged around a plaza bounded by the capitol grounds and Tenth Street, and Wabasha and Cedar Streets. A number of improvement schemes have been planned for the river front, creating greater railway yard facilities by changing the channel of the river. Still other schemes have created a complete system of boulevards and connected parks around the city.

In Minneapolis, the proper treatment of Bridge Square and its relation to the new Court House, has taken the attention of the people for a great number of years. Mr. L. S. Buffington and Mr. G. E. Bertrand have both given very creditable solutions of the problem. The first extensive plan for the city was offered by Mr. C. E. Edwins and three associates, about eight years ago.





It made allowance for a number of schemes that are now being carried out, and was no doubt quite an incentive to greater things.

Several years ago, a Civic Commission was organized in Minneapolis by the business men with the idea of improving conditions in the city by making it more perfect, beautiful, and convenient. It is composed of eleven members from the different grades of social life and commercial interests. Mr. William H. Dunwoody is the Chairman and Mr. F. W. Clifford the Secretary. Impressed by the necessity of making far-sighted plans for the future, to prevent confusion of traffic, and depression of public spirit these men engaged Mr. E. H. Bennett with Mr. D. H. Burnham as his associate, to complete plans for a civic improvement of the entire city. These drawings were finished this last month and are now on exhibition.

The gradual movement of the two cities towards each other was noted on this plan, and for this reason, many of its lines have been preserved and used on this new "Twin City" plan.

Inspired by what Minneapolis is doing, the people of St. Paul are planning extensive civic improvements of like nature, and they also are respecting the relation of their city with its "Twin".

At the present time, there are over 4875 acres of parks and parkways, 1618 acres of lake surface and fifty two miles of boulevards, that practically encircled both cities. This means that there is practically an acre of park land for each 100 inhabitants. Public playgrounds, and the enlargement and equipment of schoolgrounds, has increased the playing facilities for children to a comfortable degree, and great deal more is

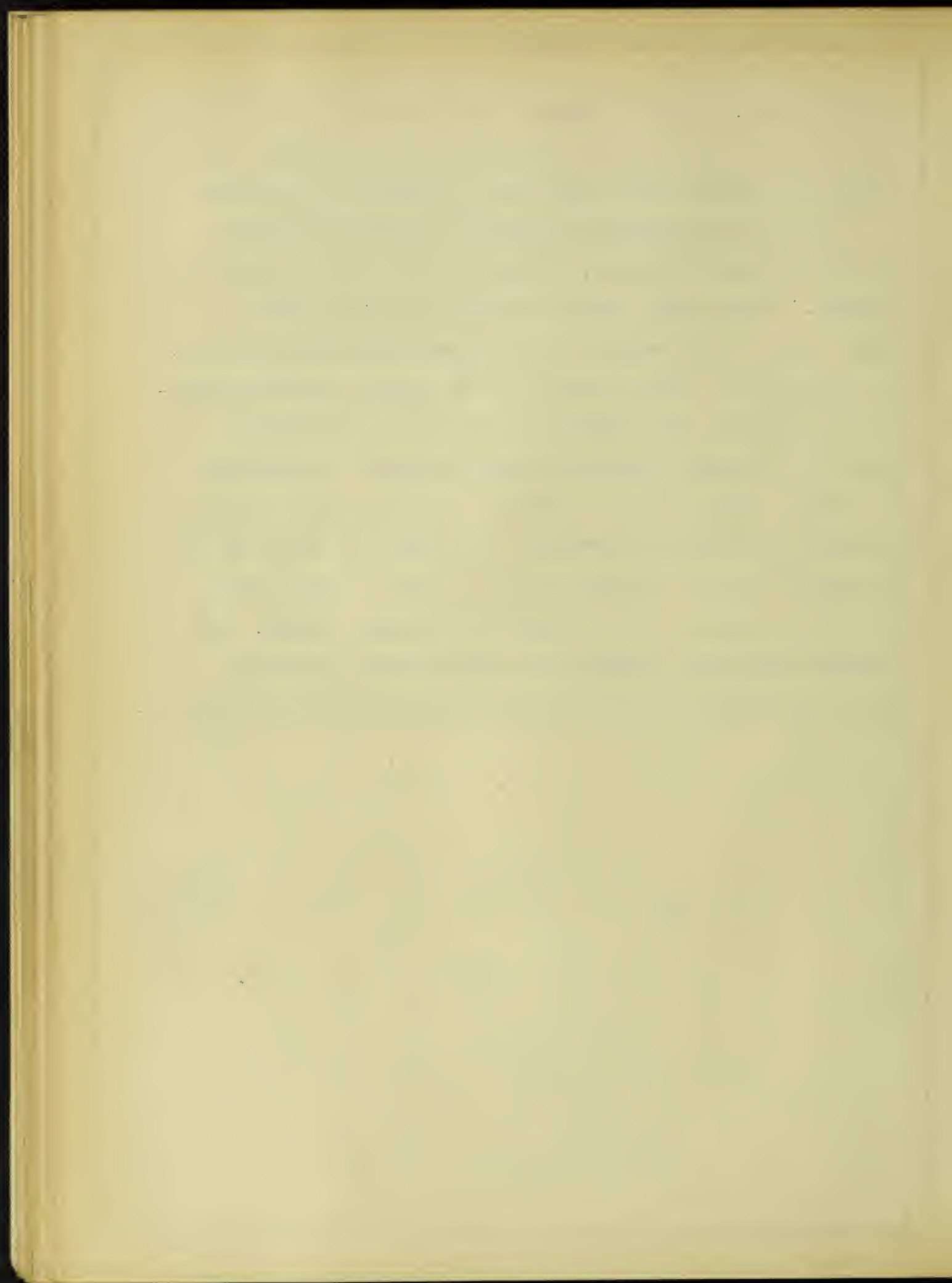


being planned. Careful attention has been paid to the boulevards and parks for the benefit of automobiles and carriages, and the street car service makes them easily accessible to everyone.

It may be of interest to summarize the many advantages that give special interest, influence, and power, to the "Twin Cities". Among these, are the special industries that are found there, their healthful and extremely attractive climate, the hospitality, and good sense of the people, the great educational advantage, and strength of religious organizations, as well as the already mentioned natural charms of the vicinity.

Having spoken of the two cities so much as one, and pointing out the many points of similarity that exist, it will be safe to believe that the consideration of a plan to unite the two into one is logical, and, it may be added, unavoidable. The increased power and prestige that would result from such a union, are enough to warrant steps being taken in that direction.





### A General Review of the Proposed Plan.

It must be borne in mind in the proposed plan that there are, at the present time, two separate centers over ten miles apart. In selecting a center, then, a place approximately half way between these two seems to present the best solution. All prejudice for one city or the other has to be thrown aside in order to secure the best possible result. Taking all questions into consideration, it seemed best to select a point along the Mississippi River where it divides the two cities and to put the civic center or hub on its banks somewhere near a point that equally divides a line drawn through the centers of each city.

In selecting the site for this center, a number of places were considered as having very desirable conditions. One of these was a place at the end of Summit Avenue in St. Paul on the east bank of the river. The main objection to this place was that the best residence district of St. Paul was located very close to it, and to create a civic center there would mean the pulling of the business part of the cities down where it would conflict with the most desirable residence section.

This objection caused a special study of the position of the different districts of each city and the permanency and desirability of keeping those districts in that same condition and relation. This brought out an interesting discovery. In looking over the map it will be noticed that the main residence districts of both cities are in their southern portions. This fact, together with the remarkable advantages and possibilities of this section if used for the residential portion of the city, gave it sufficient permanency



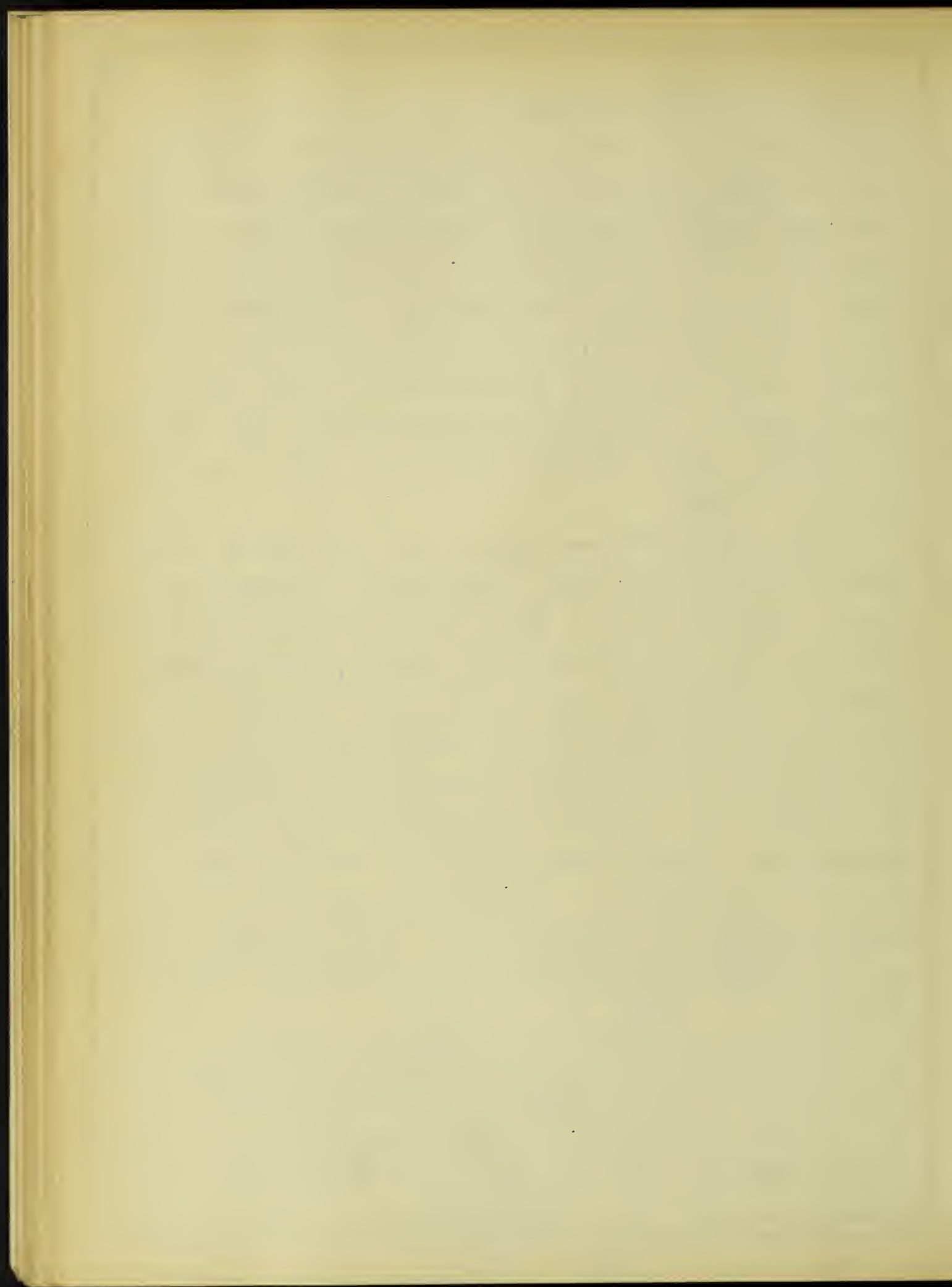


to plan the new scheme accordingly.

In drawing a line from one center to the other it was noted that the business portions of both cities are moving towards each other almost along that line and that the business section of the midway district was intersected by it. It was also noted that the largest interurban traffic thoroughfare, that of Washington Avenue to University Avenue to Wabasha Street, followed this line very closely. These facts made it seem reasonable to assume that the business section of the united city would continue in this direction and that this traffic road would form the main artery through the new business center.

Looking again at the map it can be seen that a great railway highway between the two cities is being rapidly developed and enlarged. This is the right of way of the Great Northern and Northern Pacific Railways that runs practically parallel, a short distance north, of the main traffic road mentioned above. This, with the natural ring formed by these roads, together with the Soo line north and west through New Brighton and another line of the Northern Pacific on the west and connected through the middle by the Minnesota Transfer Road, formed an ample freight loop. The most logical location for a union station for the new scheme seemed to be along the great highway near the new civic center. Near this should be located the hotel district and along the loop the wholesale, storage and warehouses.

The manufacturing district of Minneapolis is mainly located on the east side of the river though other important centers are on the north side along the Great Northern tracks and on the south side along the Milwaukee road. The east side is so hopelessly cut up by branch railways that its development for any other purpose seems

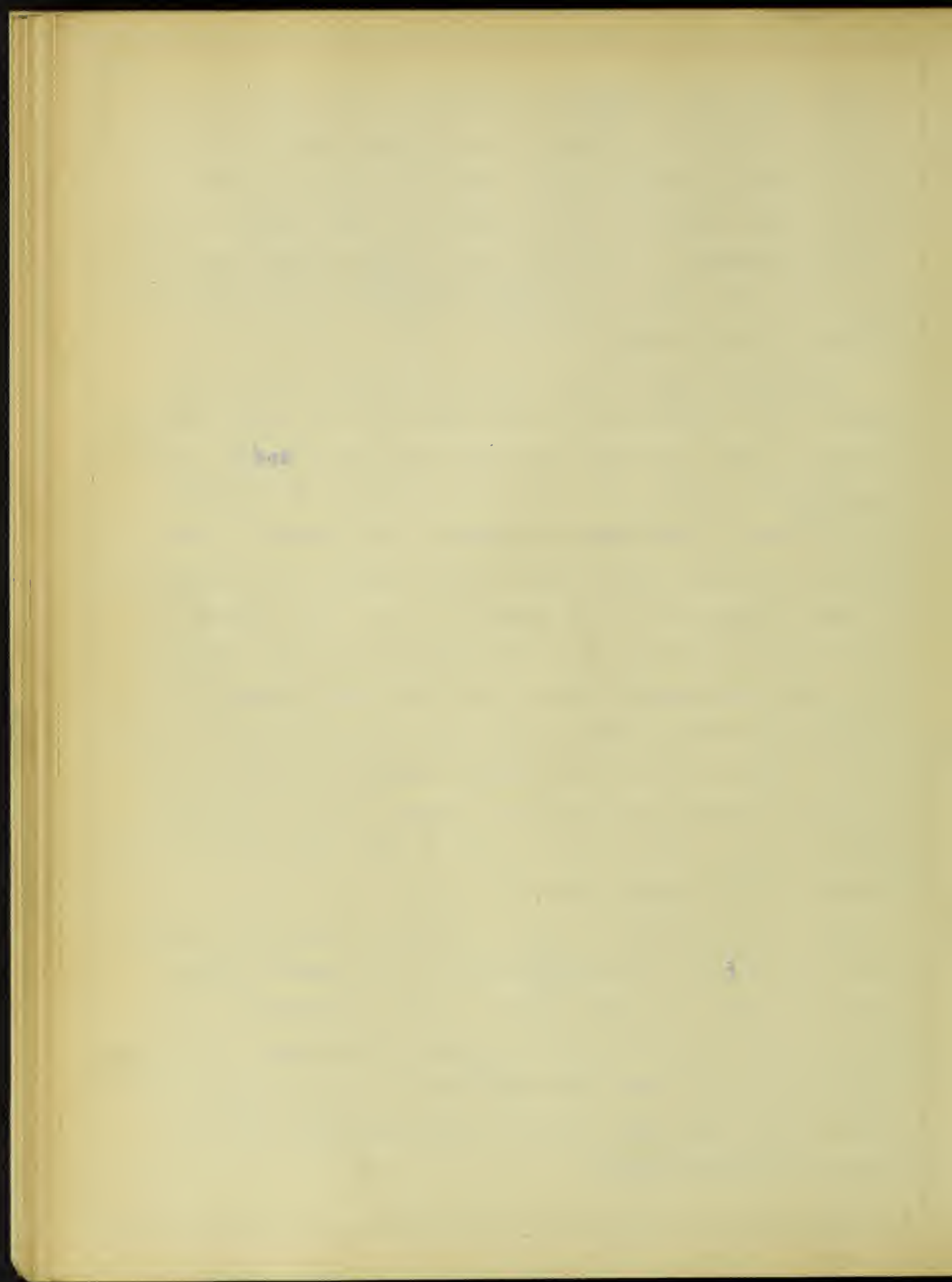


foolish. The great manufacturing district of St. Paul is mostly northeast of the business center in the valley between Lake Phalen, Dayton's Bluff and Capitol Hill. Other districts are located in West St. Paul, South St. Paul and along the Great Northern highway towards Minneapolis. The section north of this highway surrounded by the loop then seems to be the best location for the manufacturing district of the new city.

Taking all these factors into consideration, the site that seemed to best adapt itself to the problem was that of the property between the Town and Country Club-house and grounds, and the Railway Highway in St. Anthony Park. This site offered a "three-fold" center. The (1) Park Center is located at the junction of East Twenty-sixth Street and University Avenue produced in a straight line to Beverly Avenue, and a line passed north and south forming the center line of the river as it lies between Lake Street and Minnehaha. This line produced north of the Lake Street bridge becomes Cromwell Avenue which leads to University Avenue and north to the tracks. The real civic or (2) Business center is located at the junction of Cromwell and University Avenues, and the (3) Railway center along the tracks directly north of this. The center will be discussed more thoroughly later on.

The system of streets is that of a system of diagonals crossing each other at focal points, superimposed on the regular gridiron system. In this it is very similar to that of Washington, D. C. This is varied in places especially along the parkways, in the residence districts and where the contour makes it necessary, by interesting curved roads that will give a pleasing change from the severe rectilinear streets.



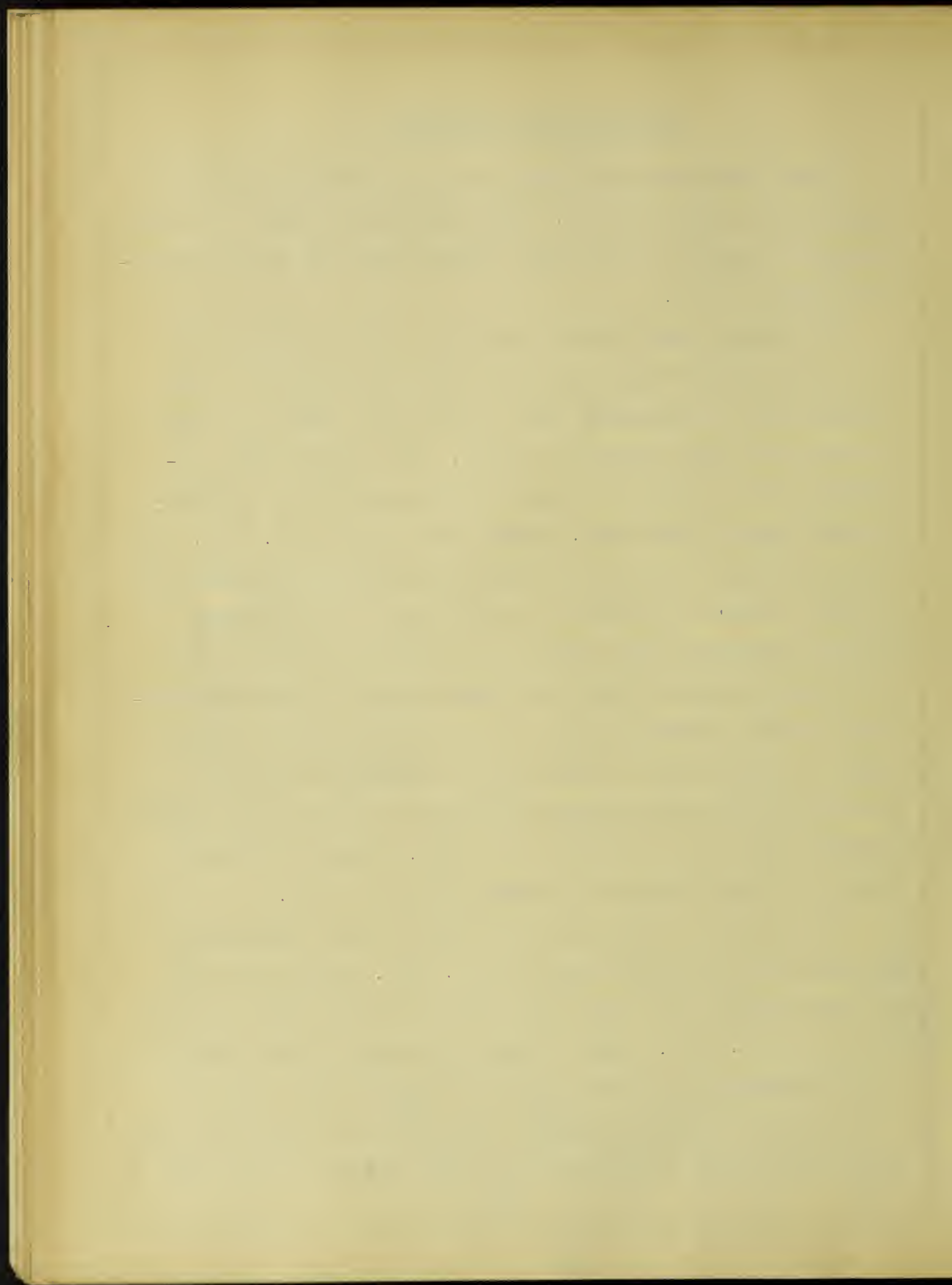


### Transportation Facilities

Proper transportation facilities are of vital importance to every modern commerical city. The problem is to handle the export and import traffic and the local exchange with the greatest possible economy of cost.

The railway loop that was mentioned above seems to be the most natural relief line for freight yards and stations. This traffic should be separated from the passenger service in order to secure more safe and rapid transit. This freight loop, extending along the Great Northern and Northern Pacific right-of-way from Camden Place to St. Anthony Park and into St. Paul, and thence north and west over the Soo line through New Brighton, is relieved through the middle by a branch line of the Northern Pacific running east and west and the Minnesota transfer line that extends north and south from New Brighton to the Midway district and the Milwaukee tracks. It is relieved also by smaller loops on the west side of the river in Minneapolis formed by the Soo line and Great Northern Railways and by the latter and the Milwaukee Short Line through to St. Paul, Radiating from the loop at different points are fourteen lines of track.

In this plan it is proposed to cover the last named road from the river to Western Avenue in St. Paul. This would help the conditions of the civic center and add value to the residence district in St. Paul. Other changes suggested, are the removal of the Milwaukee branch line from the Great Northern tracks to their main line through southeast Minneapolis, the lowering of all tracks below grade level, (except in a few cases), to avoid grade

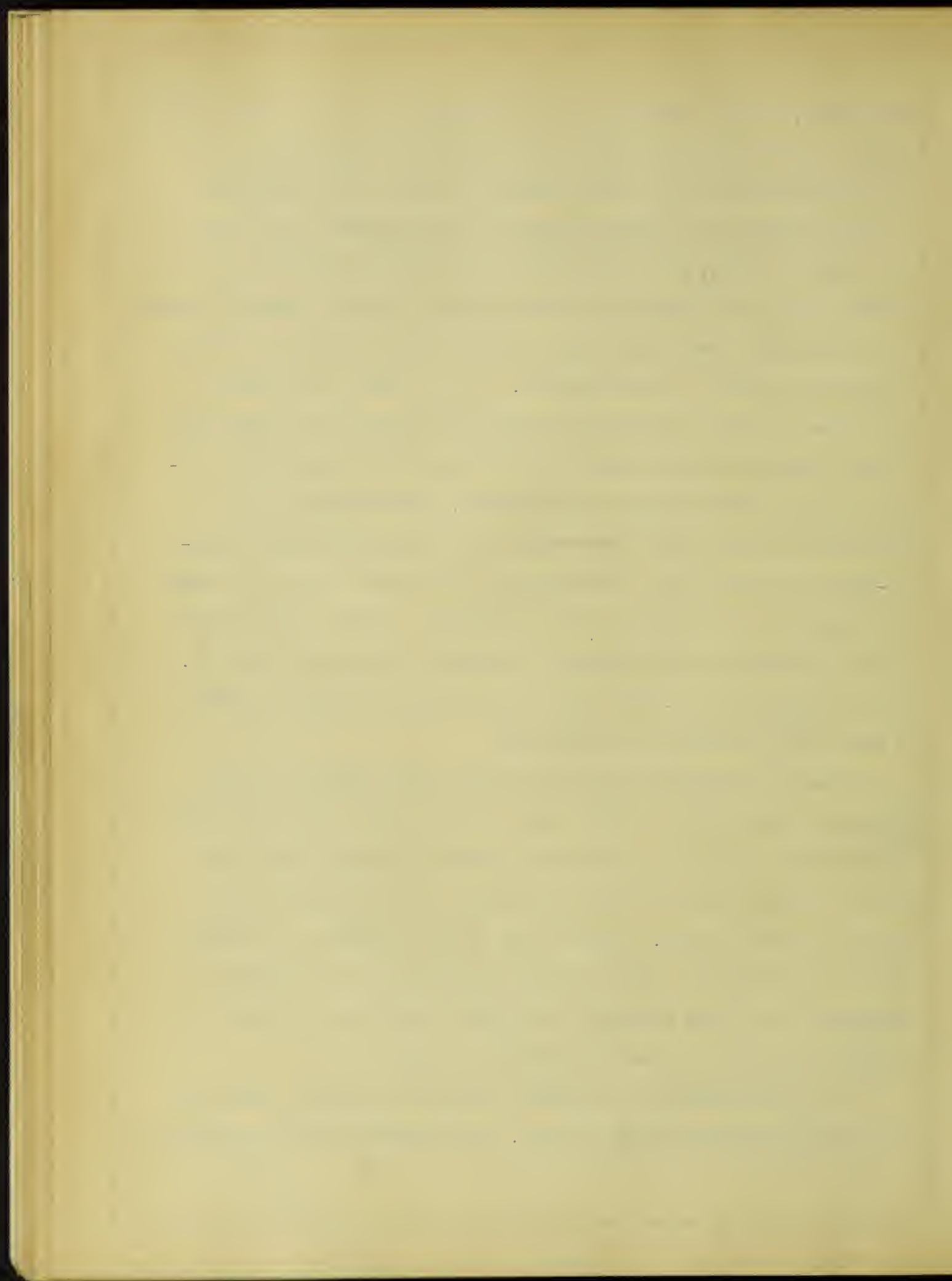




crossings, and the removal of the Minneapolis and St. Louis tracks between Cedar Lake and Lake of the Isles and their shops to a line parallel with the Great Northern tracks. The covering of the Hastings and Dakota branch of the Milwaukee road west of Lyndale Avenue, thus preserving the residence district in better unity, the covering of the Northern Pacific tracks through the University Campus and those of the Iowa division are other changes suggested for Minneapolis. In St. Paul the changes are those of the removal of the Northwestern Railway yards and tracks along the north bank of the river to the south side connecting with the Chicago Great Western, the removal of the Northern Pacific along Lake Phalen from the Northwestern right-of-way to the Soo line and bringing it in along with the latter instead, and the covering of the Minnesota transfer lines south of the University Avenue Bridge. Railway bridges at south St. Paul and near the St. Paul Union Depot should be built to form a new loop to relieve the main one.

Extensive freight yards have lately been planned by the Great Northern west of Cedar Lake and along the "Great Highway" between the two cities, by the Soo line at Camden Place and on the opposite side of the river, where the Northern Pacific is also located there. Other large freight yards are located along the Milwaukee road in south Minneapolis, in southeast Minneapolis, at New Brighton, the Midway district, business districts of both cities and south St. Paul.

A bad arrangement of terminal passenger roads has been and is a great trouble to many cities. No passenger service should



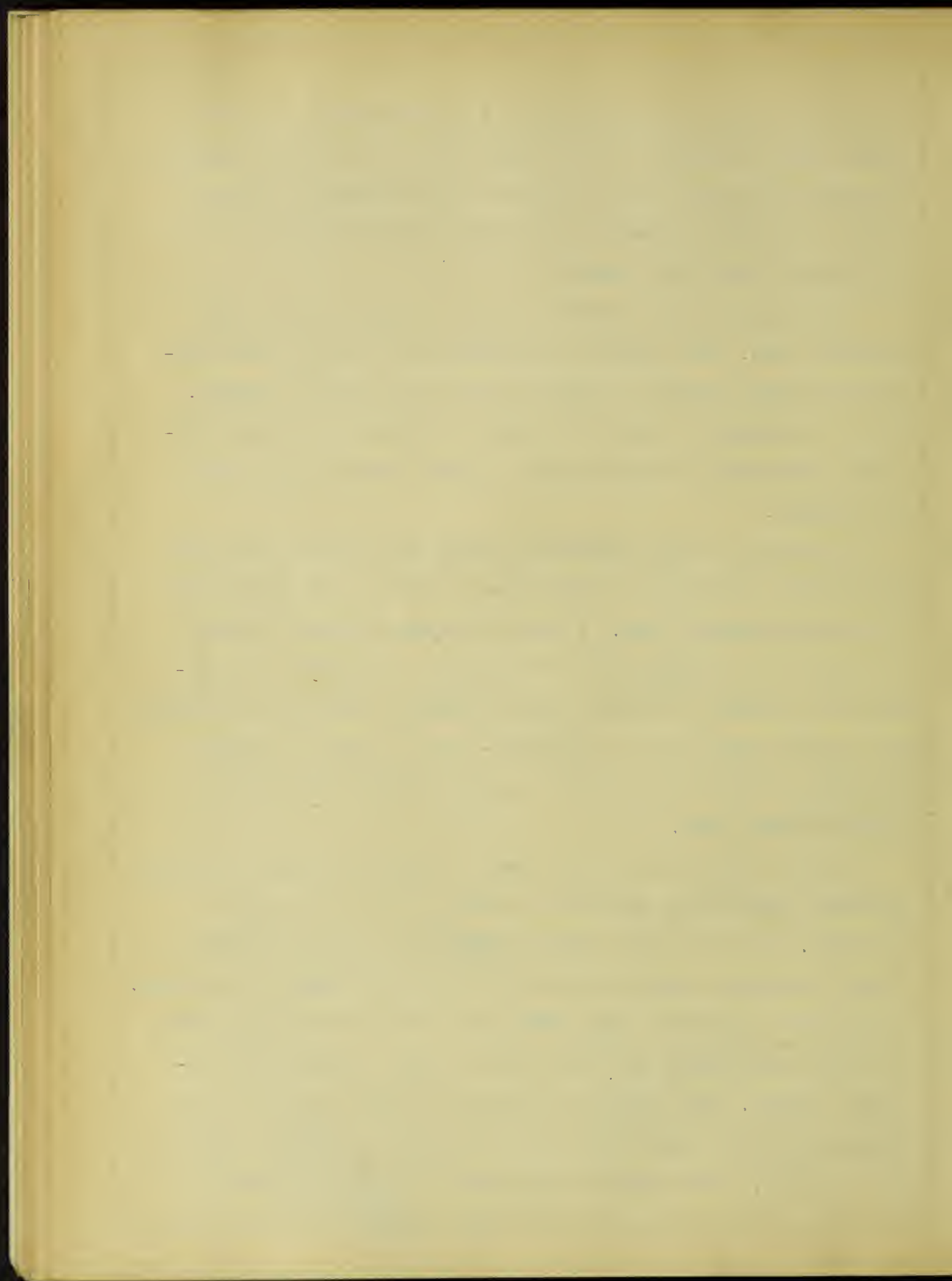
be handled along the main freight loop but brought in from the north, east and south to the St. Paul end of the "Great Highway" and from the north, west and south to the Minneapolis end, and thence along this highway to the union station located on the main axis of the Civic center.

The freight center should be located along the Minnesota transfer line. The railways are beginning to realize that harmony of action results in better service and greater economy. This is leading to a unity of action in producing the best possible conditions for handling the railway traffic within the city limits.

In regard to water navigation, enough has already been said to note the importance of the cities as head of the navigation of the Mississippi River. A deep, wide, and permanent channel is needed for the upper part of this river in order to facilitate the movement of freight up and down, and new docks and levies are needed along the St. Paul water-front in order to handle the water trade that is bound to increase after the opening of the Panama Canal.

In any large modern city an ample system of subways for local passenger and freight service is coming to be of vital importance. It will enable rapid transit from one side of the city to another, without waiting for the slower street car service. A suggested system for this subway has been carefully considered for the "Twin Cities" with the effort to get dispatch and adequate service. The system, as indicated on the maps, is that of radiating lines terminating in a loop formed by Sharon Avenue on the south, a new street on the east and north and Emerald

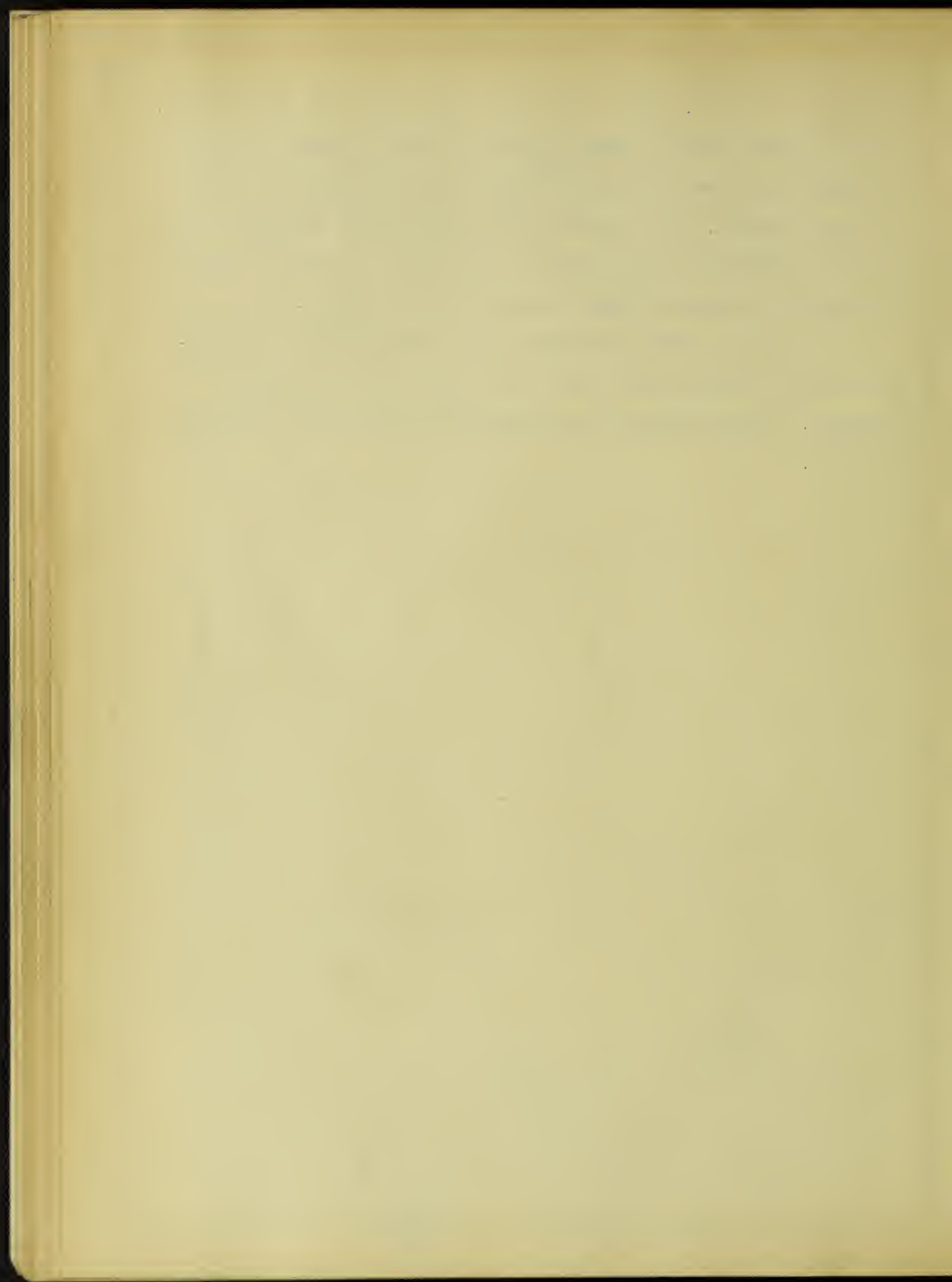






Street on the west. From this loop roads lead to Fort Snelling, south St. Paul, the St. Paul center, New Brighton, Anoka County line near the river, Crystal<sup>Lake</sup>, by way of the Minneapolis center and Lake Harriet. This system will afford quick transportation from the outskirts of the city to its business center. Local and express trains would give dispatch to the system.

A system like that in Chicago, and connected with the public service tunnels would also be of great aid in freight transfer. They should be connected with the railway freight stations.



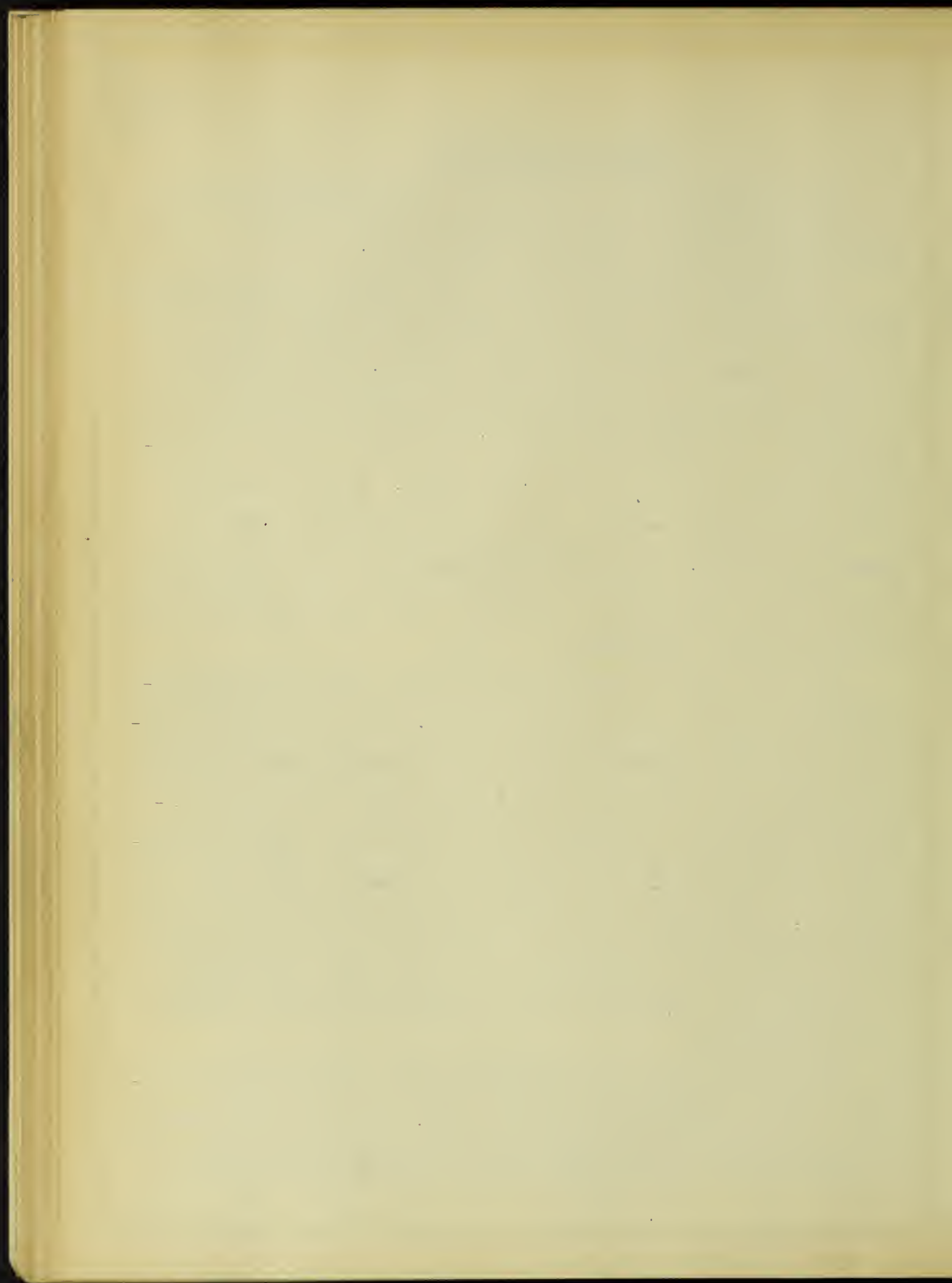
### Public Conveniences

The so-called public conveniences of the "Twin Cities" are all in need of radical change and improvement.

The present Minneapolis public water supply is taken from the Mississippi River at a point near Camden Place where there is no danger of sewage contamination from the city. The pollution of the river water due to the 20,000 square miles and 400,000 people that live in its upper basin north of the city, is the most serious objection to its use as a city supply. Due to this, great risk to the public health is run and steps should be taken to change conditions. The natural hardness due to the lime in the water, and the taste given to it by the logs that are floated down, are other serious objections.

There are three sources of water supply that have been considered as improvements over the present. These are the installation of settling reservoirs and a sand filtration plant by which all organic matter and that in suspension could be removed; obtaining supply from the water stored in the three sandstone formations below the city; and a supply from Miller Lake north of the city. The problems that were involved in this consideration were (1) the quantity available, (2) the sanitary quality, (3) the mineral quality, (4) the cost of installation, and, (5) the cost of operation.

In selecting the reservoir system, the engineers seem to believe that it solved these problems best. This is still a question. If this scheme is used, steps should be taken to prevent the





pollution of the river above the city. Public sentiment and pressure should be brought to bear to keep the river basin clean.

The St. Paul public supply is obtained partly from the glacial lakes north of the city and part from wells sunk into the sandstone layers near Lakes Vadnais and Centerville. These lakes and wells have shown a continual diminishing supply and new wells have been dug to increase it. The quality of the water is far better than that of the Minneapolis supply. The proposition to obtain the supply of both cities from Lake Mills Lacs should not be thrown aside even if the cost would be tremendous, as new developments may bring about its necessity.

The problem of sewage disposal is one of growing importance to parts of the country that are thickly settled. The contamination of rivers by sewage from large cities is bound to effect the health conditions of places farther down the river, and as in Europe it will not be long before drastic action will have to be taken in this respect in order to create livable conditions in these parts. Sewage purification will then be necessary. This at present has not affected the "Twin Cities" due to their good drainage conditions and the size and current of the river used to carry the sewage off. Some means of purification will, however, be demanded at some future time, and it will be well to keep this in mind.

The present sewage system of the two cities need a change of policy. Divisions and mains have been laid that have quickly become inadequate due to the rapid growth of that district. Thus duplications and changes have had to be made that would not have been necessary had greater foresight been used.



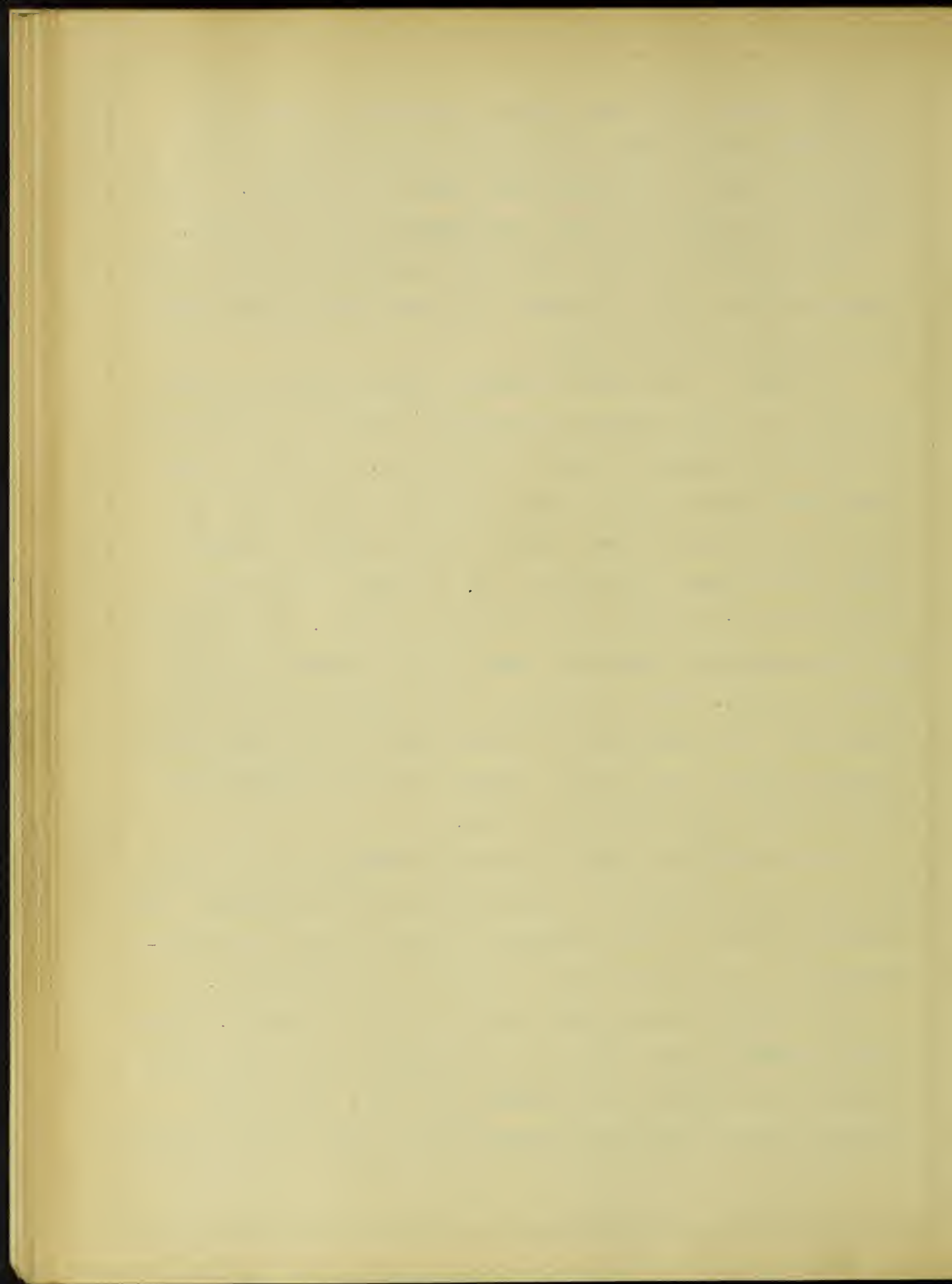
The garbage and refuse disposal question is being fairly well taken care of. This is collected from all parts of the cities and taken to crematory plants where it is burned. The sale of this garbage has been a considerable item in Chicago.

Garden and Improvement clubs have contributed greatly to the beauty of these cities by keeping the vacant lots in good shape and changing them into gardens.

In regard to the conduit problem, a great deal can be said in favor of a model system of underground tunnels to contain all the different systems of public conveniences. In Paris a great underground tunnel system, each divided into sections for the sewer mains, water and gas, and even heating pipes, electric light and telephone conduits, and even a freight service in places, has been installed and constantly enlarged. In this way, all the systems are accessible from the same entrance, and all easily repaired. This is economical and comprehensive and would serve well to be considered in the new plan for the "Twin Cities". It would prevent the continual cutting up of the pavement and be in many ways a great blessing to them.

It is safe to say that all overhead wiring, due to the danger and the unsightliness of the polls used, should be abolished. The immediate expense of the underground system is more, but is compensated by the greater economy in repairs and maintenance.

A system of heating pipe lines is a recent evolution. Large central heating plants supply heat through them to a considerable portion of the neighboring section of the city. This means greater economy in fuel and operation and is fast becoming popular.



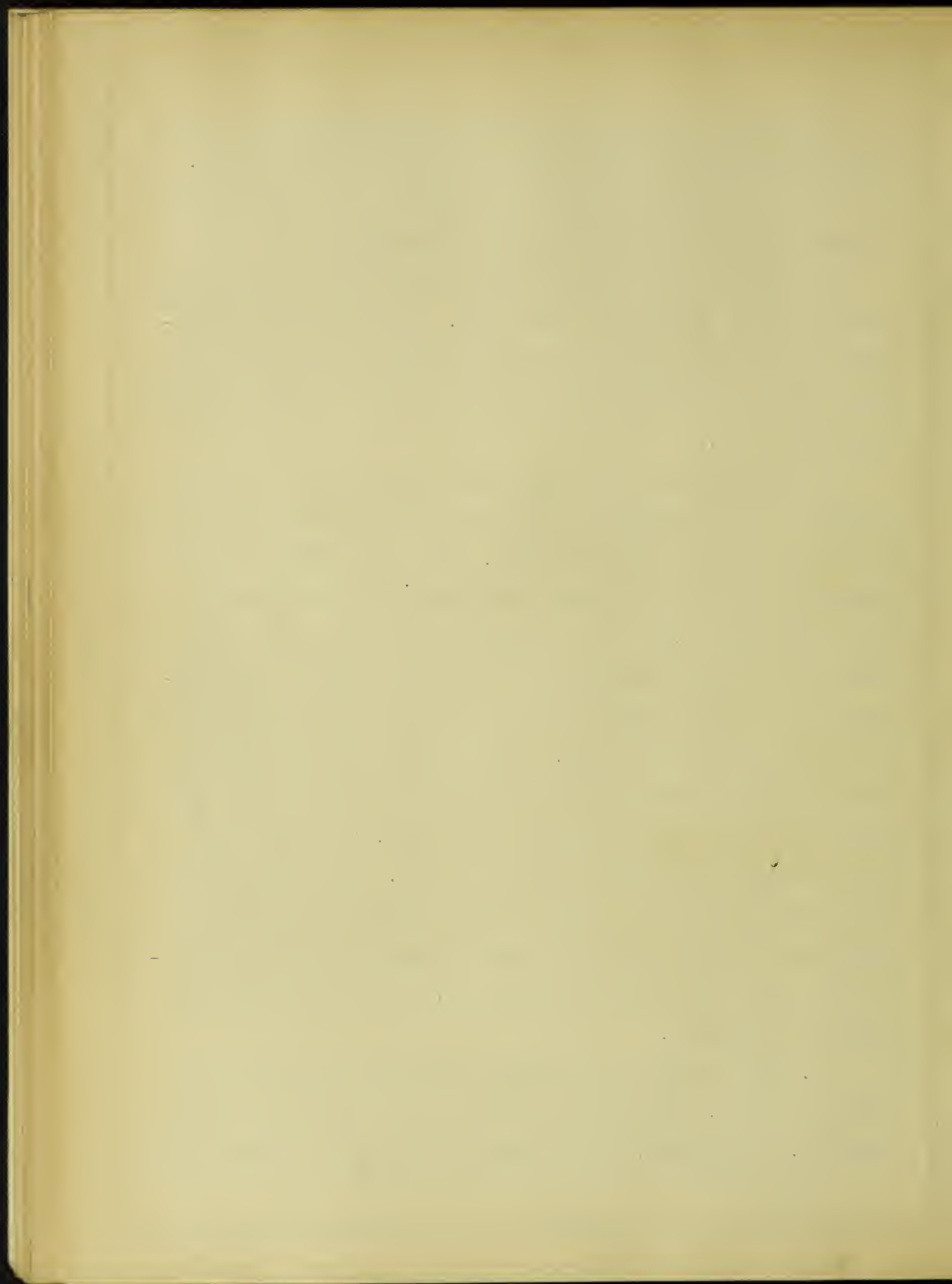


The new dam in the river near the Soldier's Home will give enough horse-power to supply electric light for both cities. This will be a great advantage and indicates in a way the great possibilities of the river for power development.

For public convenience, a complete new system of numbering the streets is suggested in this plan. In both cities, especially in St. Paul, there are irregularities at the present time which make it difficult for strangers to locate places to which they wish to go.

In Minneapolis, on the west side of the river, it will be noticed that the avenues on the north side run east and west and on the south side, north and south. This will produce a great confusion after the city has grown westward beyond Glenwood Park. To change this, it is suggested that 6th Avenue north be projected to Bridge Square and be made the Division Street dividing the streets running east and west and designating them as north and south of that line. Sixth Avenue south is one mile north of Grant Street, which is the same as 13th street. This would give about twelve blocks in that mile. The north and south division line should remain as it is. The change would allow all streets to run east and west and avenues north and south, leaving the streets as they are, except in North Minneapolis, where they would be renumbered. On the East side no change is suggested.

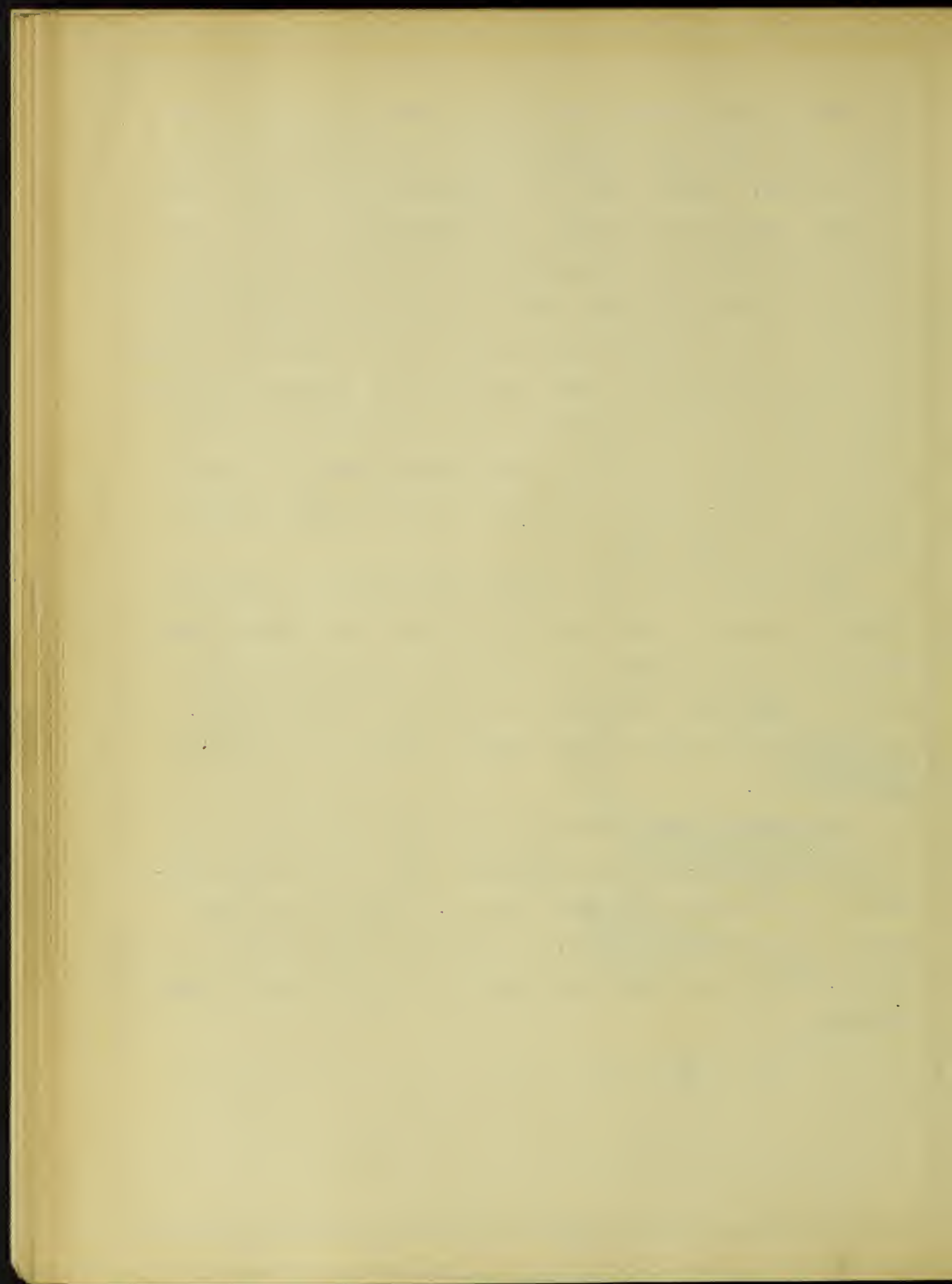
St. Paul presents an extremely difficult problem of this nature, to solve. The present system is involved and extremely puzzling to strangers. It is suggested that North Capitol Avenue



and Wabash Street become the principal north and south division line. This would mean the numbering of all streets as east and west of this. Several lines are suggested for an east and west division. One is along Summit Avenue produced to the river and which would not change the numbering of the down-town streets, University Avenue and Conway Street as passing through the capitol, and a third along the south border of the State Fair Grounds, and which corresponds with 6th Avenue north in Minneapolis, which would allow all streets north of that to be numbered the same across the entire two cities. Summit Avenue seems to bring in the least change. In West St. Paul, the streets should number south from the north edge.

Considering both towns together, the most ideal method of numbering would be to have the main east and west division along University Avenue through the civic center and the north and south division along the north and south axis of this center. This would involve such a great change, however, as to make it impracticable.

The schemes first mentioned would allow a division of the city into boroughs, calling Minneapolis west of the river, Minneapolis or Minnehaha, the east side, St. Anthony; the central portion of St. Paul, St. Paul; and South and West St. Paul, Dakota. This would allow the numbering to be different in each division.

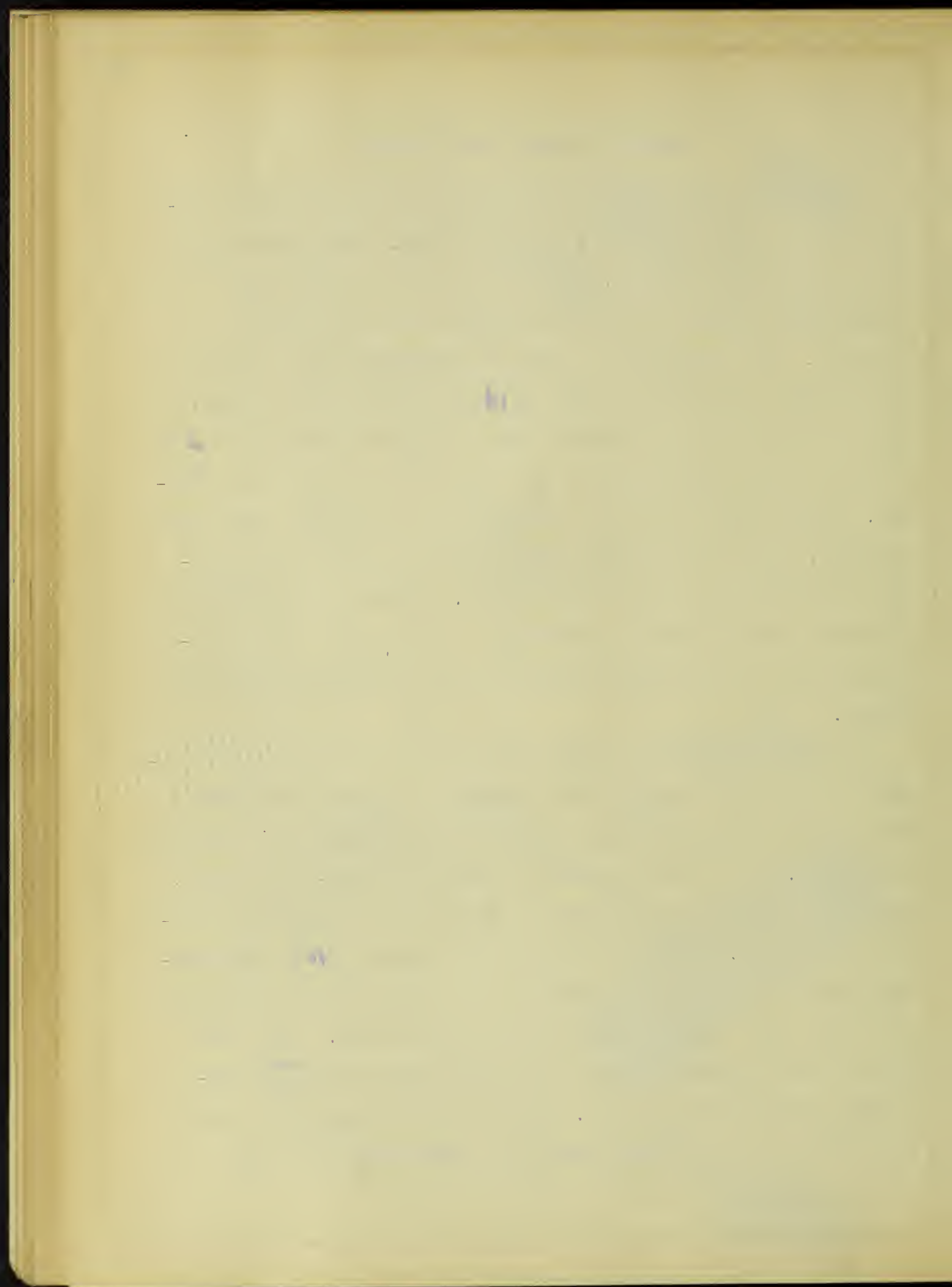




### Traffic Avenues and Streets

The bridges that span the Mississippi are an important factor in the traffic business of these cities. Many new bridges have already been planned, some are suggested on this new scheme and a number of the old bridges need an increase in capacity. The inadequacy of these old bridges brings out the desirability of building future bridges for enormous traffic. Some of these should be double level bridges allowing the tracks of the railways and subways to pass below the level of the roadway. Among these latter are bridges at the Milwaukee Short line crossing, one above Fort Snelling, one in the Minneapolis center and another in the St. Paul center. Those withing sight of the civic center should be monumental in character to add dignity to the city and well designed to be attractive as well as useful.

In regard to traffic avenues and streets running at right angles to each other and the new diagonals, it should be mentioned that there has been an attempt made to separate them from the park boulevards. This is one reason for having a three-fold center. The Civic center is located at the junction of Cromwell and University Avenues. Through this at thirty degrees in a northeastward direction another diagonal has been made. This crosses the river and meets 26th Street near 32d Avenue south. From this point a new diagonal is run to the Lake Street bridge<sup>and</sup> to University and Fairview Avenues. This forms a large traffic loop from which there are radiating larger thoroughfares in all

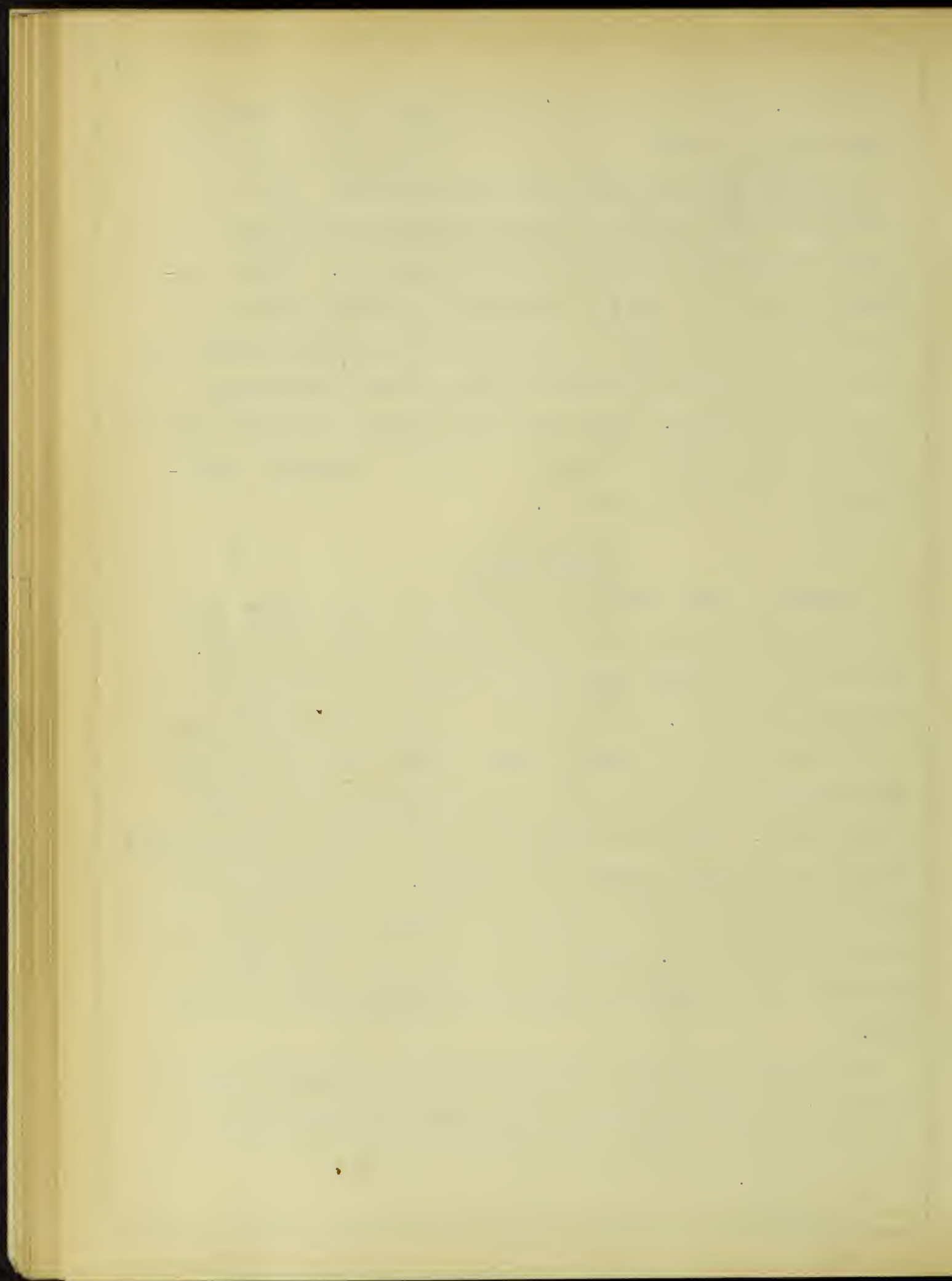


directions. The necessity of these diagonals is realized when considering the loss of time due to the rectilinear system in transferring traffic diagonally across the city. The main thoroughfare from one city to another should be wide enough to divide the different classes of traffic vehicles. Traffic congestion at any point could be relieved by allowing that in one direction to go over that at right angles to it, and providing for change in direction by providing diagonal streets through the four adjacent blocks. These last named schemes have been tried in Europe with a great deal of success and it certainly facilitates traffic to a great extent.

#### Park System

A number of wide boulevards lead from the park center into the residence section and to the surrounding parks and lakes. These should be formal, dignified in treatment, and ample for prominent promenades. On both banks of the river from Lake Street to Minnehaha there is planned a great pleasure drive from which the features of the civic center and the channel of the river can be viewed. The other diagonal drives are like in character and lead to the prominent parks in the suburbs. The buildings along them should have a uniform frontage and height and be well designed and attractive. Lines of large trees and grass plots beautiful with shrubbery and flower beds should shade and adorn them.

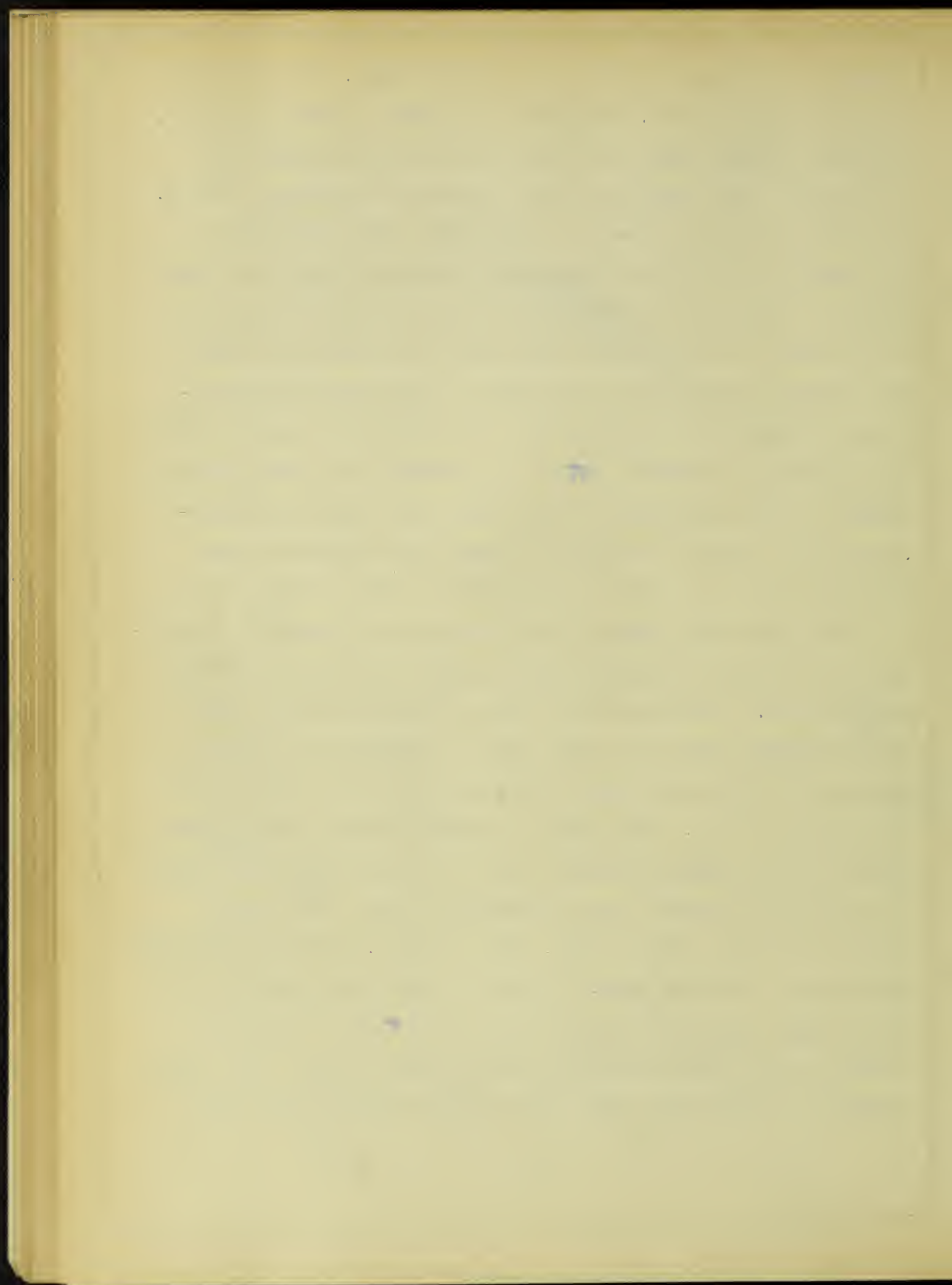
Surrounding the center are five rings of boulevards connecting the different parks and points of interest. The inner two are





formed on straight diagonals in a diamond shape. The first runs from the junction of L. Arpenteur and Cromwell Avenues produced, southeast through the State Agricultural College grounds and State Fair to the junction of Dale Street and University Avenue. From there it runs southwest to Minnehaha, thence northwest to the junction of Nicollet Avenue and 26th Street where a new Art Center is suggested and from there through the new Minneapolis Civic Center and University Campus back to the starting front. The second rings run from the center of the manufacturing district, southeast through Como Park and along Como Avenue to the State Capitol; southwest past the Cathedral and along Pleasant Avenue to Fort Snelling; northwest past Rice Lake to the junction of 26th Street and Hennepin Avenue; and northeast along Hennepin Avenue and Central Avenue back to the starting point.

The other three rings are more informal and natural in character and followed the contour of the ground and natural features more closely. The inner one of these follows the river bank from Minnehaha Park to St. Paul where it goes north to Lake Vadnais and thence west past a series of lakes and along Rice Creek to the river. From there it reaches Palmer Lake follows Shingle Creek runs past Crystal Lake to Glenwood Park from which it follows the present line to Minnehaha again. The second takes in Mendota, West St. Paul, Pigs Eye Lake, Indian Mounds Park, Lake Phalen, Pleasant Lake, the river a short ways north of the other ring, Eagle and Medicine Lake, Bassett's and Minnehaha Creeks and Wood Lake and the Minnesota River Valley. The third starts at a point four miles south of Fort Snelling and takes



in Chaplin Lake, Red Rock, Lake Elmo, White Bear, Bald Eagle, Centerville and other lakes, Conn Creek, Osseo, Wayzata on Lake Minnetonka, Anderson Lake and Ninemile Creek and Minnesota River to the start. Another ring could be drawn to take in the cities of Excelsior, Chaska, Hastings, Stillwater and Anoka.

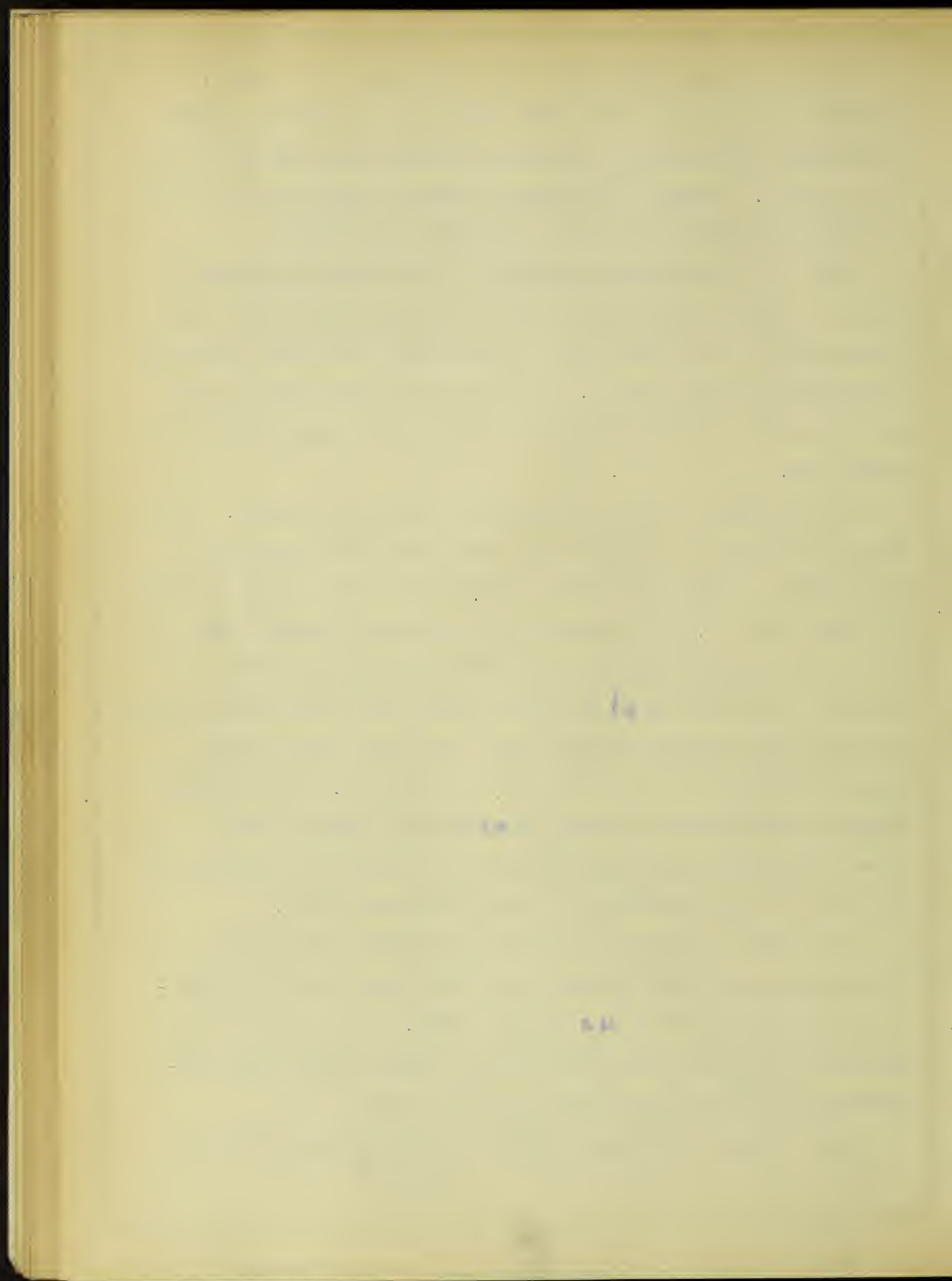
The river front should be lined on both sides from Camden Place to South St. Paul with a broad and stately boulevard thus preserving the river from ugly features and from refuse that would otherwise be thrown into it. All the lakes of any size at all and the creeks should be likewise protected and preserved for public use.

The treatment of the different parks should be varied. Some should be formal in character and artificially developed while those which present a high degree of natural charm should be left as nature left it. The treatment of the Capitol Grounds, the Civic Center, Bridge Square and the Minneapolis Art Center should be strictly formal and be developed with the idea of creating impressing and dignified result that will speak well of the wealth of the city and the pride of its citizens. The outlying lakes and creek should maintain their natural beauty. Great areas of new park land should be reserved around the city as has been done so well in Berlin and other European cities.

Recreation and amusement parks are provided for in this plan in the way of small squares scattered over the city and devoted especially for the use of the child. A good plan is to have these connected with the different schools, providing gymnasiums and baths and athletic fields for them.

Large bathing facilities should be provided for, or enlarged,







at Lake Calhoun, Cedar Lake, Halls Island, Sandy Lake, some of the lakes north of St. Paul, Harriet Island, Lake Minnetonka and White Bear. Band stands, shelters for picnickers and pavilions of attractive character would be factors for the adornment of the larger parks.

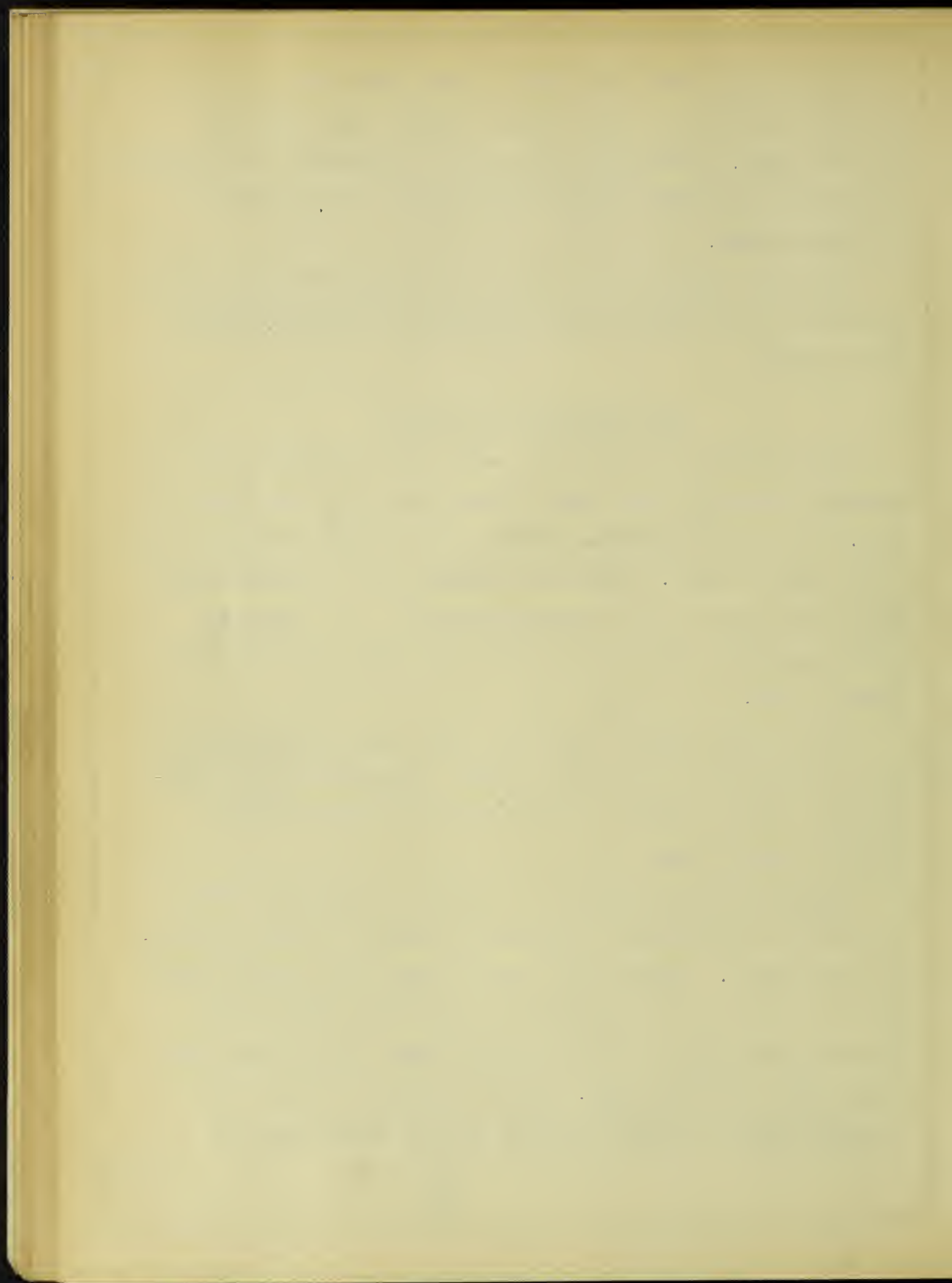
Monuments, fountains and small architectural features should be placed in the smaller parks and squares, especially, as well as the others.

### The Districts of the City

The importance of placing the undesirable features of a community where they will least effect the city is seriously felt. The prevailing winds indicate that the best place for these is in south St. Paul. This is far enough away to prevent odors being blown back over the residence district. All the stock yards, tanneries, linseed oil mills, and crematories should be located there.

The new large factory district as has been already mentioned is located north of the present cities. There most of the manufacturing plants should be located on spree lines brought in from the freight loop.

Large park squares should be created and scattered thickly through this district for air space and plenty of shade and rest, for the workers. Between the lakes and park areas located north and east of this district should be located the homes of the laborers near at hand to their work, but away from the smoke and desolation of the factories. Proper sanitation, living conditions, and educational facilities must be planned and the



place kept livable and the houses attractive.

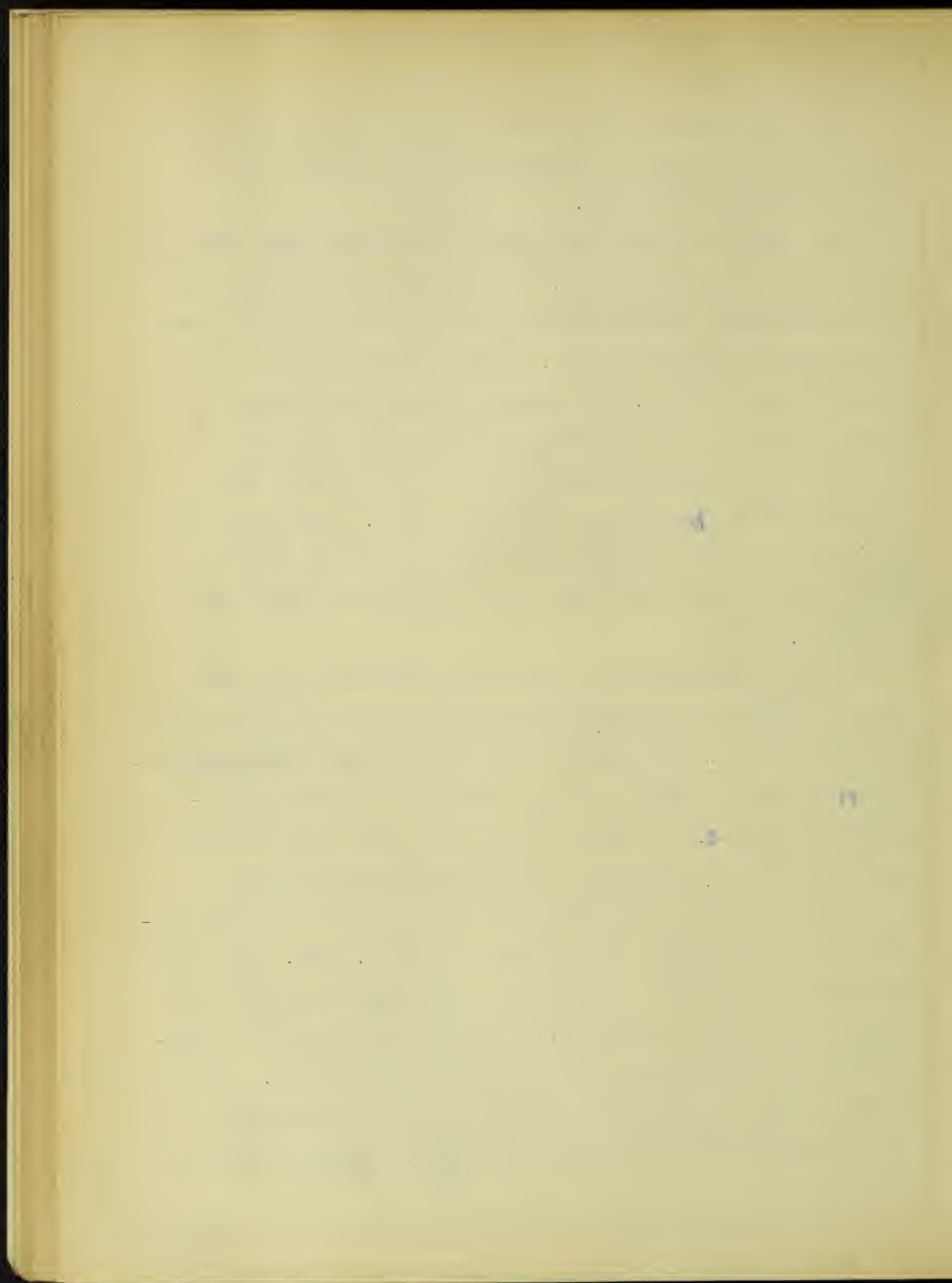
Along the freight loop the wholesale storage and ware-houses are located on account of convenience to the railways and to other districts of the city.

The freight terminals are placed at intervals along this loop where branch roads lead to it. The main central terminal is on the Minnesota Transfer Tracks north of the city at its junction with the Northern Pacific. This is in the center of the manufacturing district. New transfer roads, river levies, cleaning yards and railway shops are indicated on the map.

The produce markets should be located along the railway highway towards ~~the~~ business section districts. Sanitation and cleanliness are the principal questions to be taken care of. Large open pavilions and sheds mark the places for the market gardeners.

The best location for the financial interests of the new center seemed to be between the river and University Avenue near the Civic Center. Here would be located the trust buildings, banks, clearing houses, brokers offices, chamber of commerce and insurance companies. It should be near the large retail district and not far from the borders of the manufacturing section.

The big retail and business district lies south of the railway highway and reaches from Minneapolis to St. Paul. University, Minnehaha and Marshall Avenues in St. Paul and Lake Street, 8th Street produced, Washington Avenue and University Avenue in Minneapolis form the principal east and west traffic roads. Three large centers would naturally be in existence, that in Minneapolis, that in St. Paul and the new district in Midway. In these places all

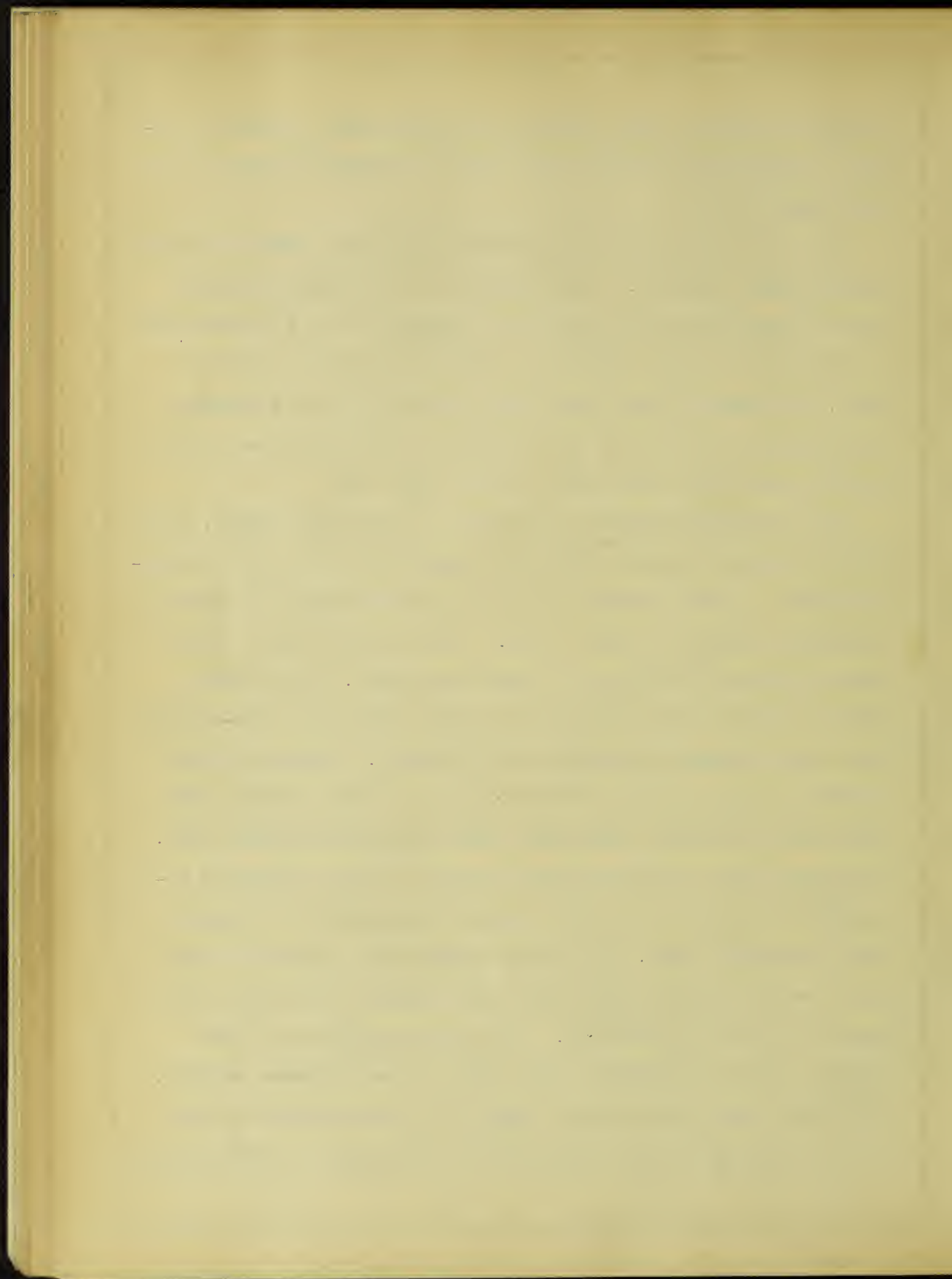




classes of stores, light, pleasant and convenient, should be located. Circulation through the streets of these districts is of vital importance.

The best location of the new hotel district seemed to be near the passenger terminal. The business and traveling men would then be placed where they would be convenient to the station and to places where rapid transit to outlying districts would be handy. The family hotels and flats should be located between the business district and the residence section on streets that are not best suited for either of the other two.

The residence district is located as mentioned before, south of the business district. The more formal and city like residences should be built towards the flat district along the straight residences avenues of both cities. The building line of these houses should be the same all along any street. The streets should be lined with boulevards and trees and large well-arranged grass plots between the walks and the houses. Farther out the residences should be less formal and have a more suburban like character with larger lawns, more trees and greater garden area. The small retail stores scattered in this section should be located on blocks set aside for them and surrounded by pleasant lawns and shade trees. This would prevent the location of the stores on the street corners and would improve the looks of the residence district immensely. The general character of the streets should be different from those of the business section. The curved roads indicated in some of the new sections of the city are planned so as to give greater charm and more interesting



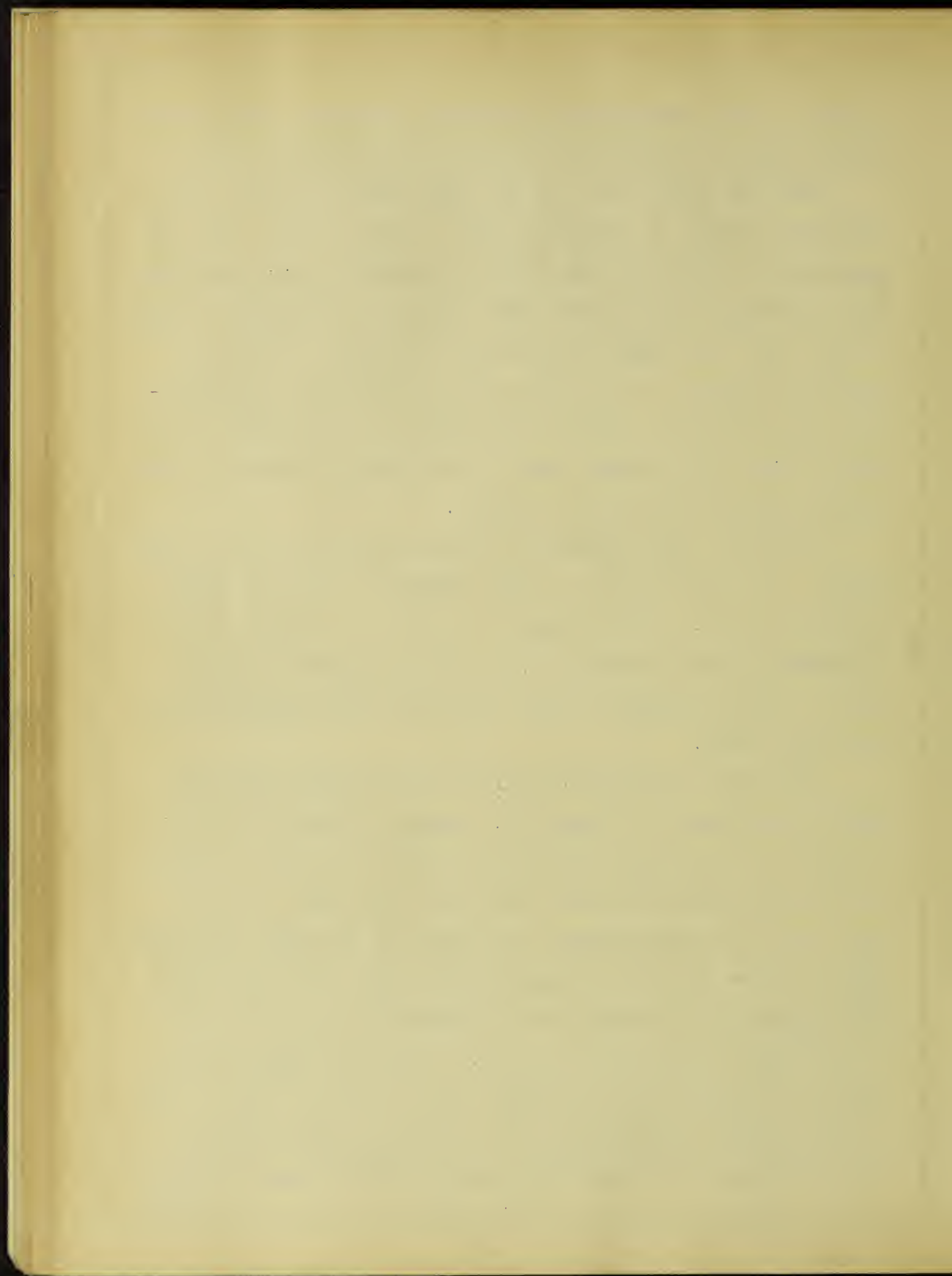
setting to the residences and cottages. Quietness, charm, repose and privacy are the principal factors to be considered here.

There are already many private club houses located in interesting settings in different parts of both cities. The organization of golf, athletic, boat, automobile, gun, commercial, improvements, and professional clubs should be encouraged, as many of them erect and occupy interesting club houses and keep up extensive grounds, or are factors for the education and uplifting of the citizens. Social organizations for the people of the "Twin Cities" are already a vogue, and these are helping to pull the interests of both cities together.

The public school districts are well taken care of in these cities. No other place has a more creditable system of grade and high schools. Modern demands are making it necessary that the grounds be well equipped with athletic amusement devices, and be extensive enough to serve the entire child population of the neighborhood.

Regarding the two Universities located within the city limits some changes are suggested. Hamline University should be moved to a place near the residence district where it would not be encroached upon by the industries near there. This is true also of the Undergraduate Department of the State University. A New location for this is suggested on a site half way between Fort Snelling and Minnehaha where a beautiful view can be had of the river up to the Civic Center. The present campus is so extensive and practically permanent that it should still be used for the graduate department and the advanced medical courses, but is so near in line with the present line of growth of the







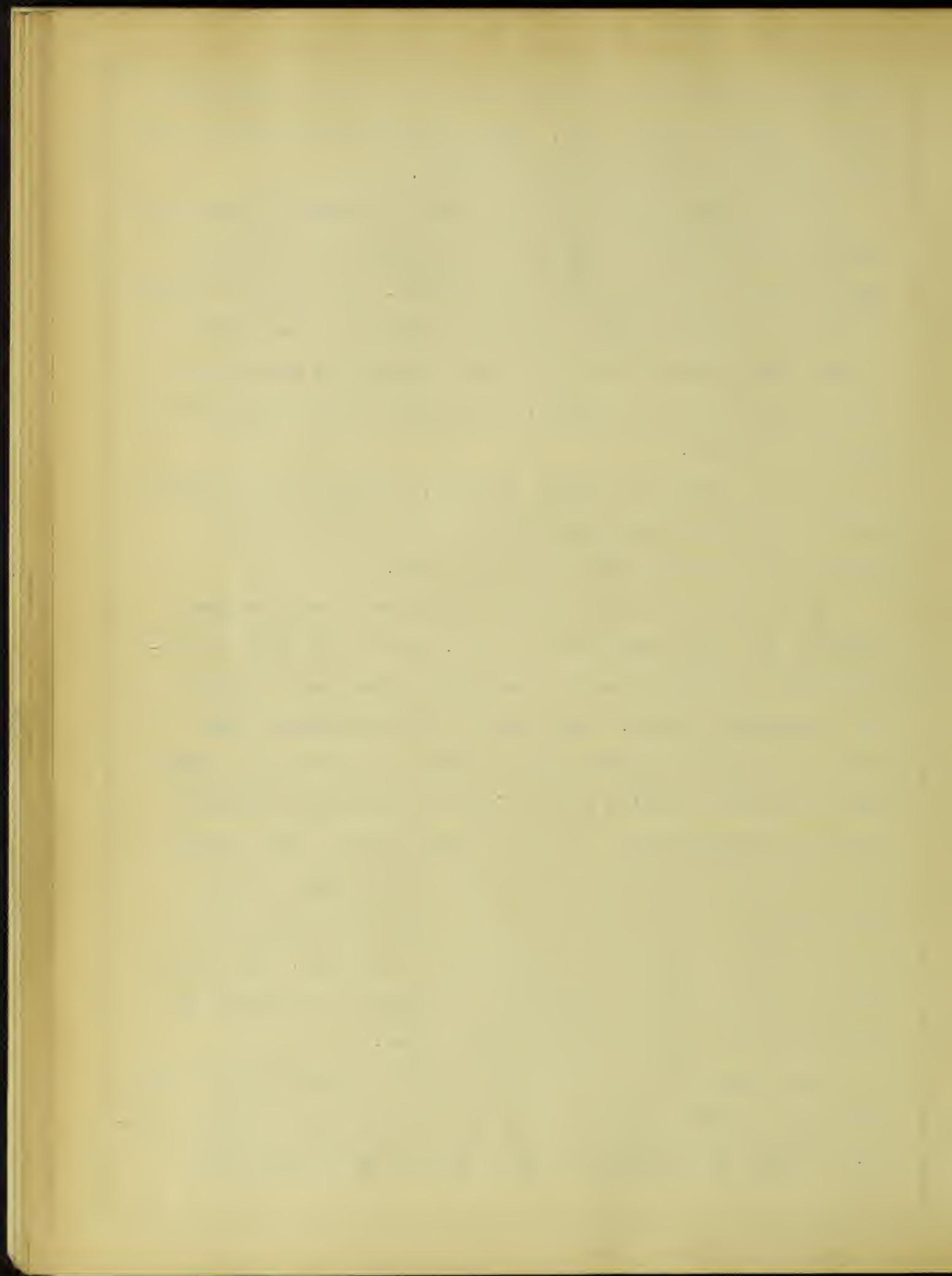
business sections that it would soon become rather undesirable for the general student body. The agricultural department could also well be located near this new place.

The libraries should be distributed in branches in different districts of the city. They may be located at the different school houses as is being done in Brooklyn. The central library, as well as the art gallery and museum, could well be located in a group near Nicollet Avenue and 26th Street, and the new site for the Minneapolis Art Museum. This would form an interesting center of culture.

Special schools for night students, tradesmen and foreigners should be located in the laborers residence district and in places in the business section of the city.

The theaters and opera houses should have three separate centers, one near Seven Corners in St. Paul at the foot of Summit Avenue, a second near the new civic center, and a third in the Minneapolis center. The group of art buildings at 26th Street and Nicollet Avenue would be added to greatly if a model opera house were located there so near to the best residence district of Minneapolis. There are many natural bowls formed that could well be developed for open air theaters. Large stadiums should be located at the new university site and at the State Fair Grounds for Olympic games and races. The one at the State Fair should be improved to contain a motor cycle and automobile speed way of the best type known.

Small hospitals for the cities should be distributed in the different sections, so that immergency cases can be handled quickly. A large and extensive central hospital with room for all

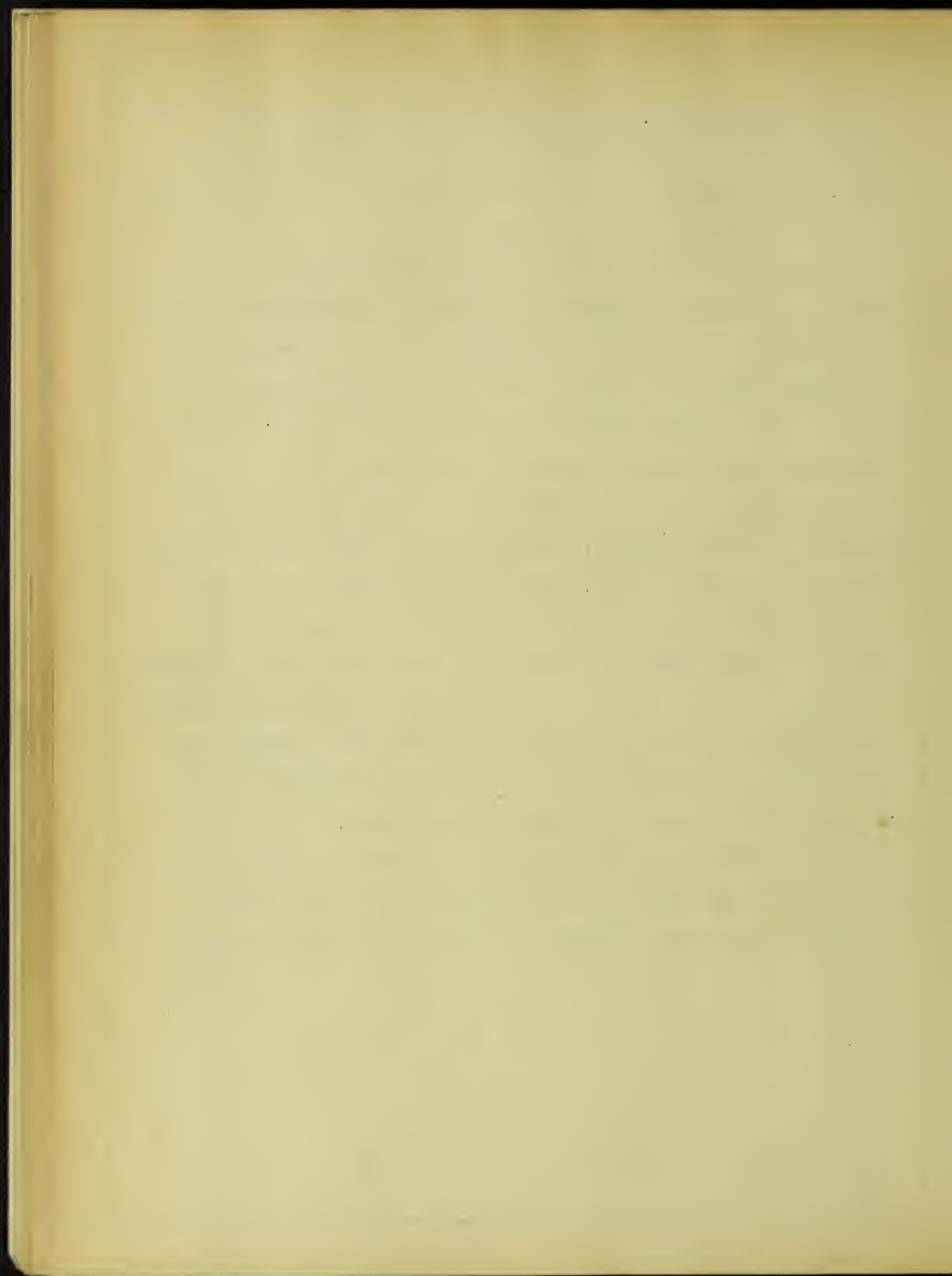


kinds of cases should be located in a quiet, central place along the west bank of the river, between Lake Street and Minnehaha Park. The private and institutional hospitals will take care of a good per cent of the sick cases.

Suggestions are made for the improvement of a number of points of interest. A new parade ground is established at Fort Snelling, and considerable improvements of the reservations and buildings suggested, together with a better arrangement of the latter. The Soldier's Home at Minnehaha could be improved by erecting better and more home-like buildings.

The acquiring of the entire Capitol Hill by the state, bounded by Central Avenue, Jackson Street, Como Avenue and Rice Street, is strongly urged. This tract leveled to that of the capitol grounds and improved by a dignified group of State buildings would form a rich crown for the capitol city. Further enlargement of the capitol building is provided for by putting the central feature across University Avenue and placing the dome over that position, with the addition of another wing, similar to the present building, north of that.

A new axis and main group for the State Fair is suggested to be placed on Snelling Avenue facing south. The Central feature would then be located at Snelling and Buford Avenues.





### The Civic Center

The location of the new three-fold Civic Center has already been indicated and the logic of its selection as the best location, well discussed. Views of the present conditions of this ground, as it is at present, accompany this thesis and show clearly that very little will have to be removed or cut away in order to build this group.

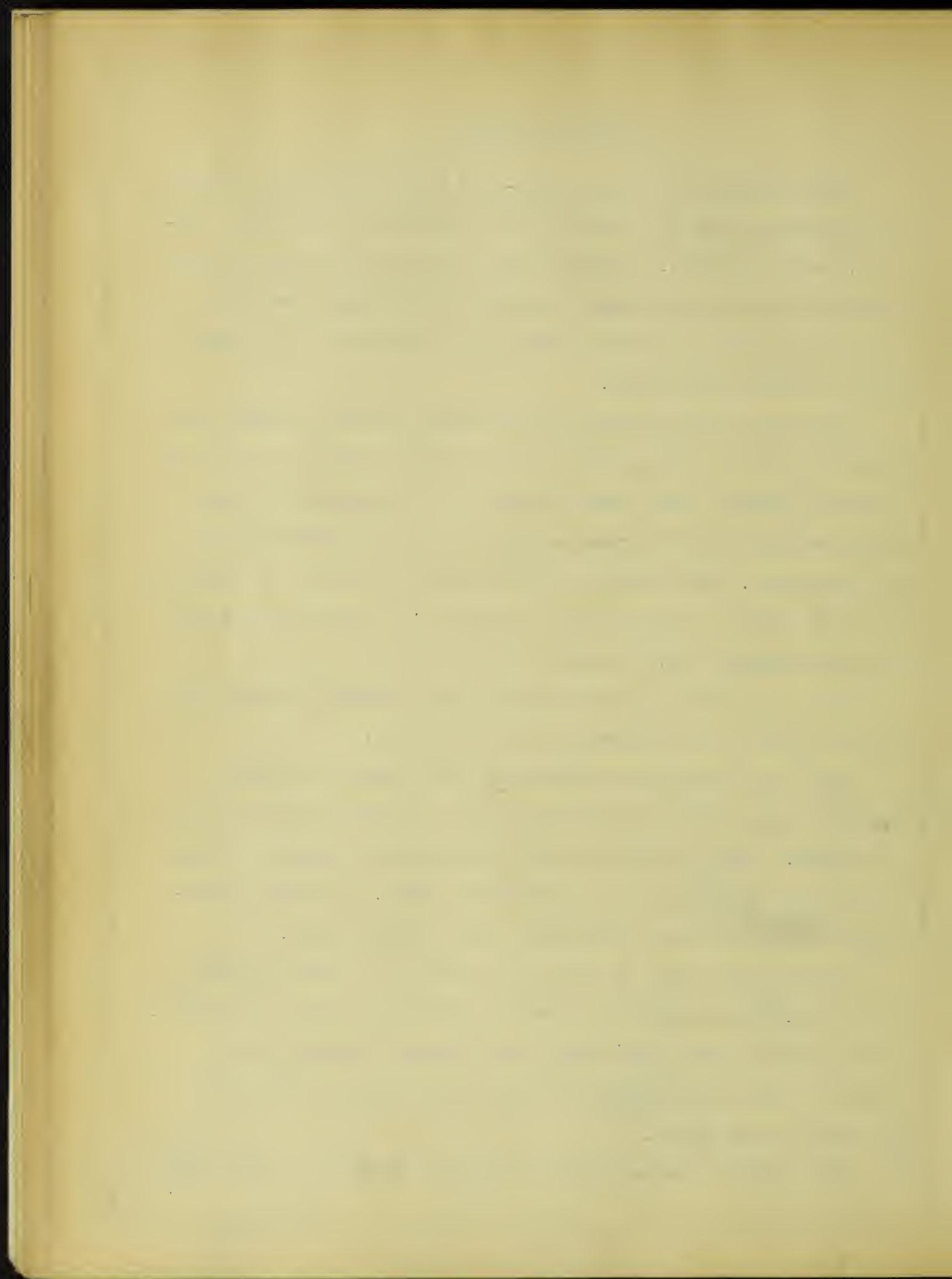
The large union station and passenger railway terminal are located on fairly high ground in St. Anthony Park at the end of Cromwell Avenue. This should be built to accommodate locals going west, and locals going east, and the large through trains and terminals. The subway stations could be located on the east and west end of a large plaza in front of the main station that is approximately 280,000 square feet in area.

From the south side of this plaza and leading to the civic center proper is an avenue over 300 feet wide.

The city, county and Government buildings are located around a large public square 200 feet wide and 900 feet north and south. This is marked in the center by an imposing column fitting in treatment for its prominent place. The two, intersecting diagonals are each practically 200 feet wide.

Leading from this to the park center is a boulevard 800 feet wide, flanked on both sides by impressive public buildings, and marked by grass plots and trees treated formally and by a pool in the center leading to the great central feature of the whole composition.

This central feature is a mammoth and imposing tower about

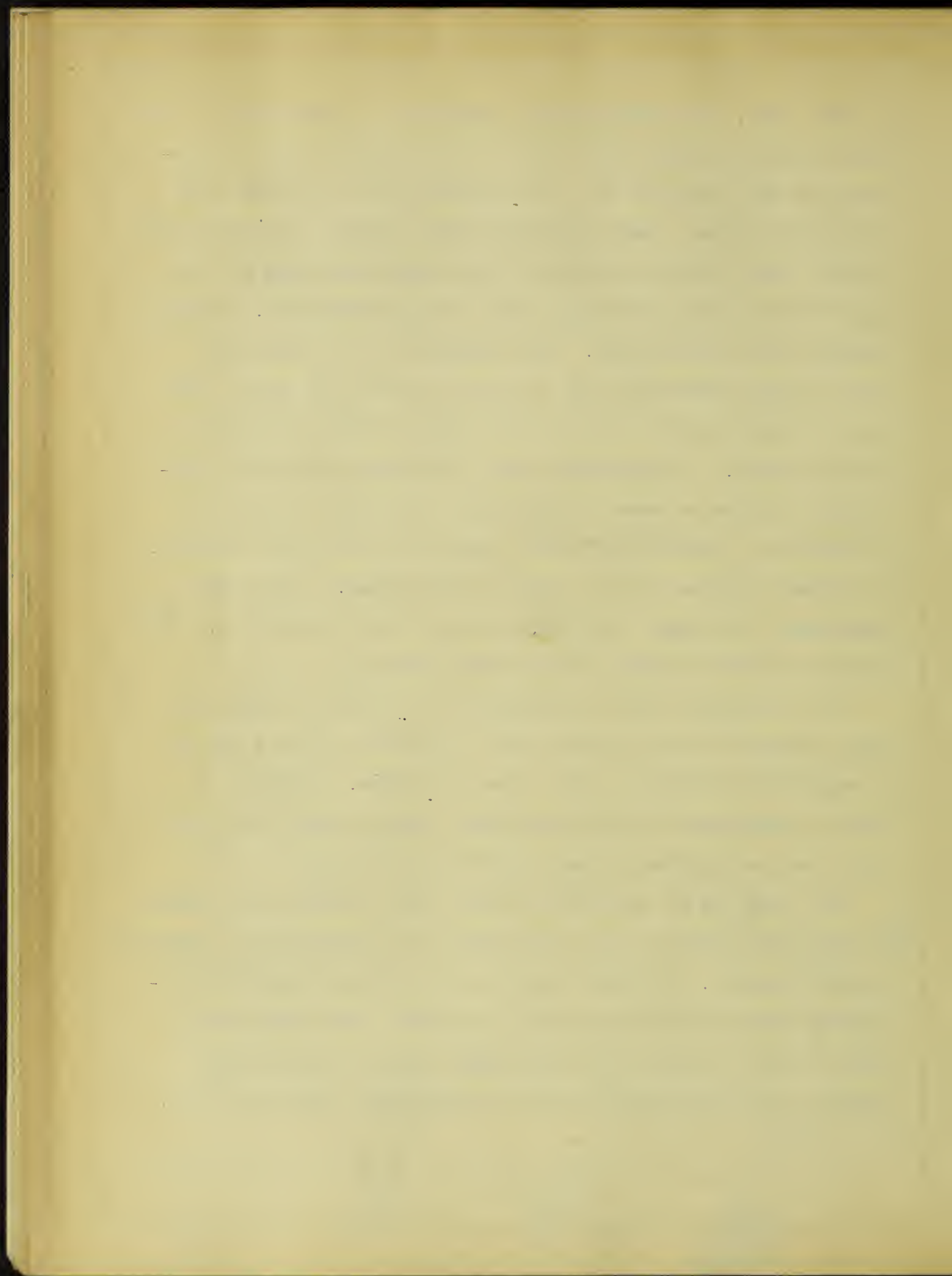


600 feet high. The architectural treatment is symbolical of the best there is in Civic Art, and it is the aim to create a monument that will prove to be a fitting crown for the whole civic improvement scheme. Many boulevards will radiate from this tower and the vista formed by it from these long avenues and by the open view from down the river, will be very impressive. It will dominate the whole picture. The location is in a beautiful grove of woods about 160 feet above the river level and at the crest of a mound that is part of the range of hills following the river bank. A large park area is reserved around this feature and treated to show a change from the formal treatment on the mound to a strictly informal treatment in the river channel. The natural contour of the ground is maintained. Impressive promenades, stairways, and fountains embellish the picture. The details can best be seen by noting the drawings.

It is suggested that the monuments be erected in honor of those citizens of the city who have or may give their lives as an unselfish sacrifice to save that of others. Another, is that it commemorate the four principal peoples that inhabit the city, the Scandinavian, German, Briton, and Russian.

This tower is to be built of rough faced granite in a modern classic style, strong in its massiveness, and imposing and inspiring in its treatment. It should serve as an outlook from which far-reaching views of the city will be possible. The whole civic center should be built in a harmonious manner, each building related to the other and the whole forming one impressive unit.



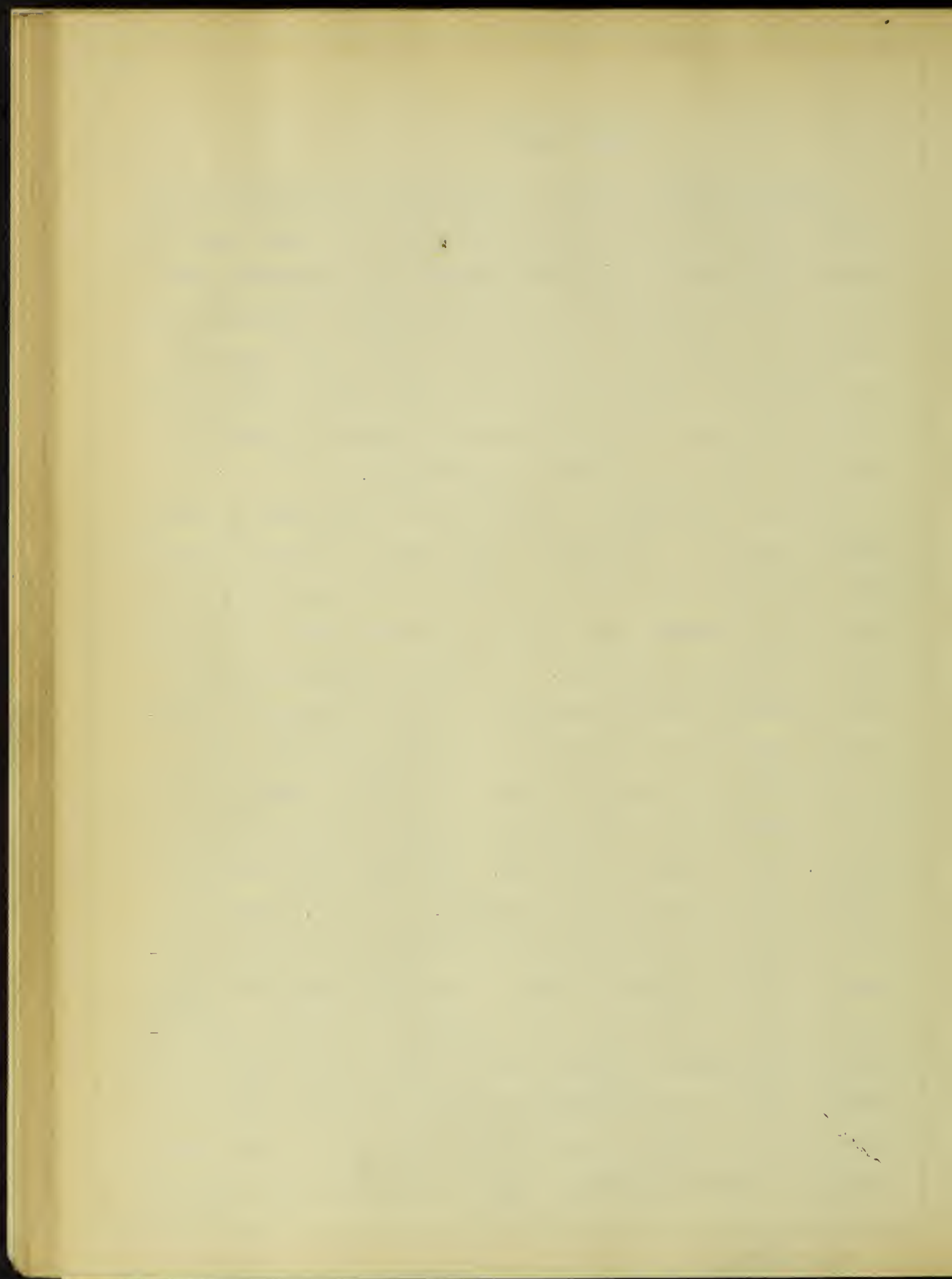




### Legal Aspects

Modern times are rapidly bringing out the injustice of the further use of the right of eminent domain by railways especially within city limits. Many needed reforms and conveniences are thwarted by this right, and an arising current of opposition is setting in. During the earlier days, it was a good provision, as it aided the railways in extending their roads without prejudiced opposition. The settled country at present demands new laws that will create justice to the citizen.

The city governments of the cities have the power of taxation in respect to the payment of the expense of all improvements. This right may bring a burden of taxes on the people, that will make living expenses high, but, if judiciously used, would create model conditions in the city. St. Paul has recently adopted a Civic Commission form of government. This if followed by Minneapolis and later by the united city, will undoubtedly mean greater efficiency in jurisdiction. The capitol city should be able to get help from the state by taxation for the improvement of the state features of the city. This would help materially towards solving the problem of expense. Mr. D. H. Burnham has summed up the legal aspects in his Chicago book in three statements: (1) that without additional legislation many of the recommendations of the plan can be adopted, (2) that the legislation has ample power to grant either to the city or other governmental agencies such additional authority as may be necessary to carry out all of the recommendations of the plan as fully and as rapidly as may be found wise, and (3) that additional authority



is essential to the effective accomplishment of the most important of these recommendations. The power to condemn property for public use is already being made use of in extending the present scheme of improvement.

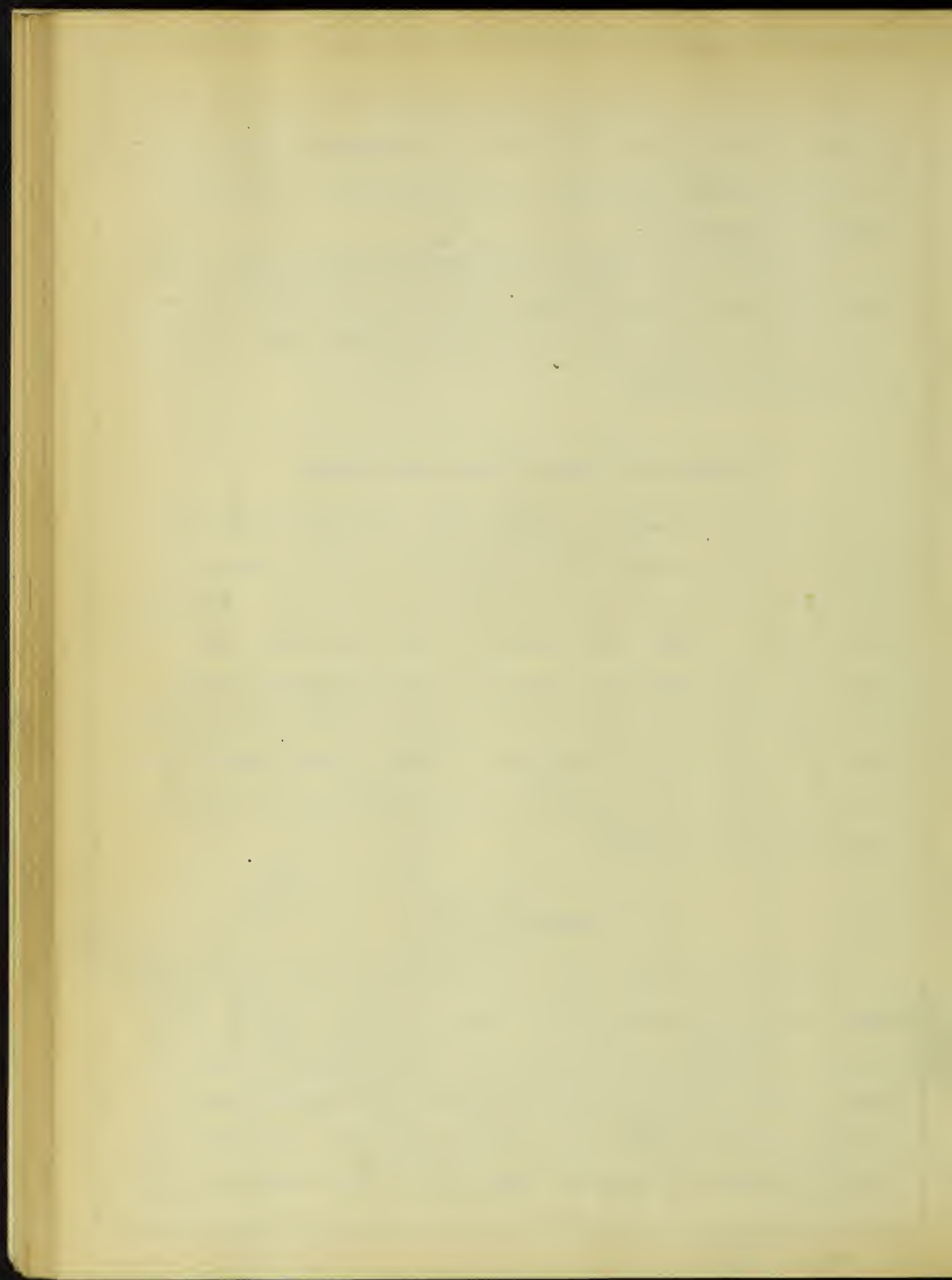
The health and safety of the citizens should be well taken care of in strict sanitary laws, proper fire and accident protection laws and protection for the poor and weak, and all should be rigorously enforced.

#### Estimate of the Cost of the Civic Center

It has been carefully estimated from valuation figures of property in the vicinity of the new center, that the complete area around the monument, and the diamond shaped piece around the Civic Center enclosed by a boulevard, would cost less than \$4,000,000; and part of this would be resold to private hands, after replotting, part bought by the government for its buildings, and part by the railway companies for their station and approaches. It is not very fully developed at present, and the cost, for that reason, is very reasonable.

#### Conclusion

The influence that such a complete plan as this would have upon the city if carried out can hardly be fully realized at present. The cost consideration is a big problem, but when we think of what London is paying for meager improvements, merely to make the city livable, this item is diminished in importance. Careful thought and study has been given to the problem and it is

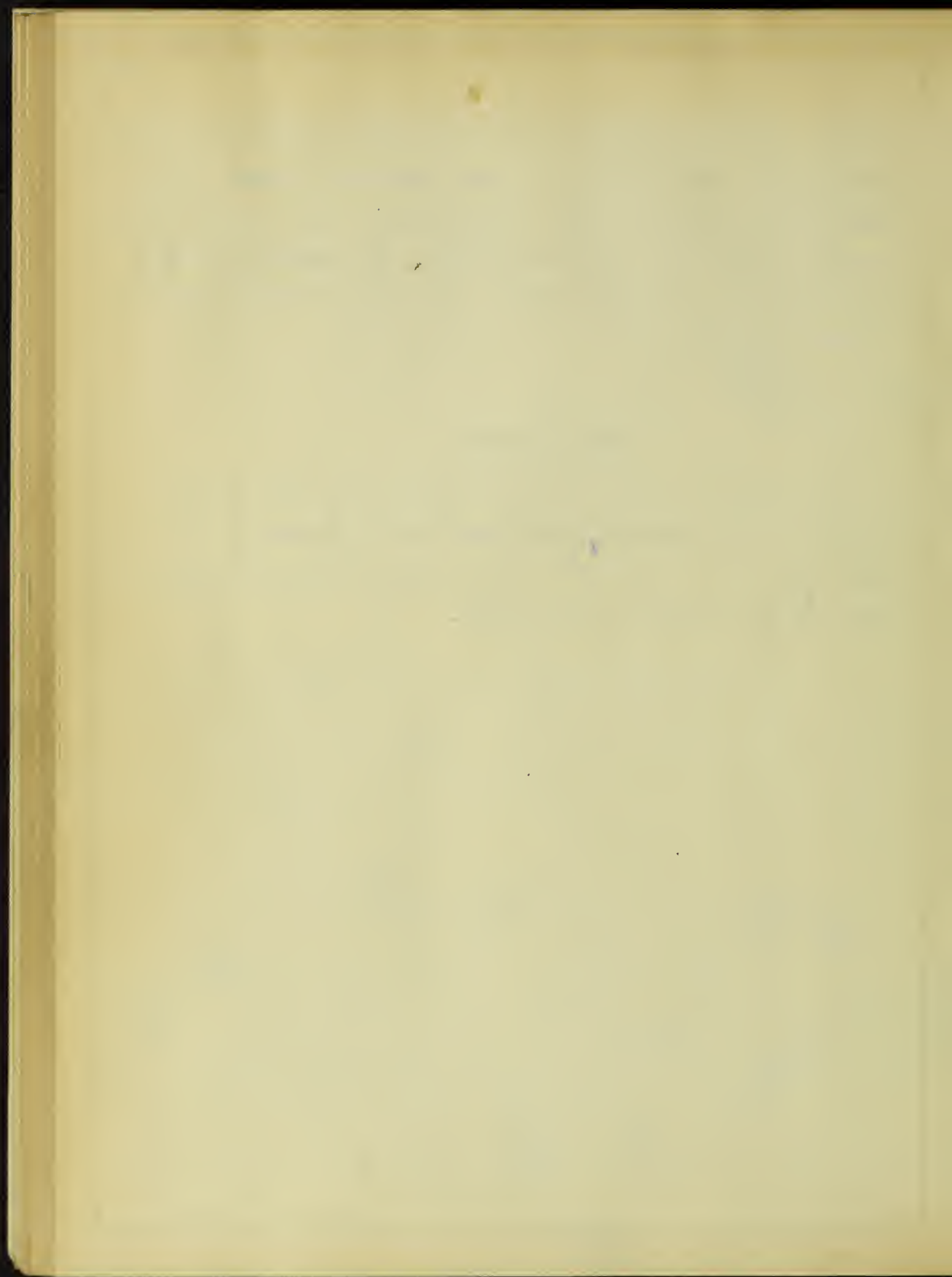




believed that the essentials of the best scheme possible have been carried out. Aided by gifts of public spirited citizens, and by help from the state, the plan should not prove such a heavy burden, as may be thought upon first observation. The difficult features could be added at different times as the years go by, and gradually the new plan completed.

#### Acknowledgments

The kindness of the Minneapolis Journal, St. Paul Pioneer Press, the city engineers, park board, and other officials of both cities, and the park officials of some of the other prominent cities, is heartily acknowledged.

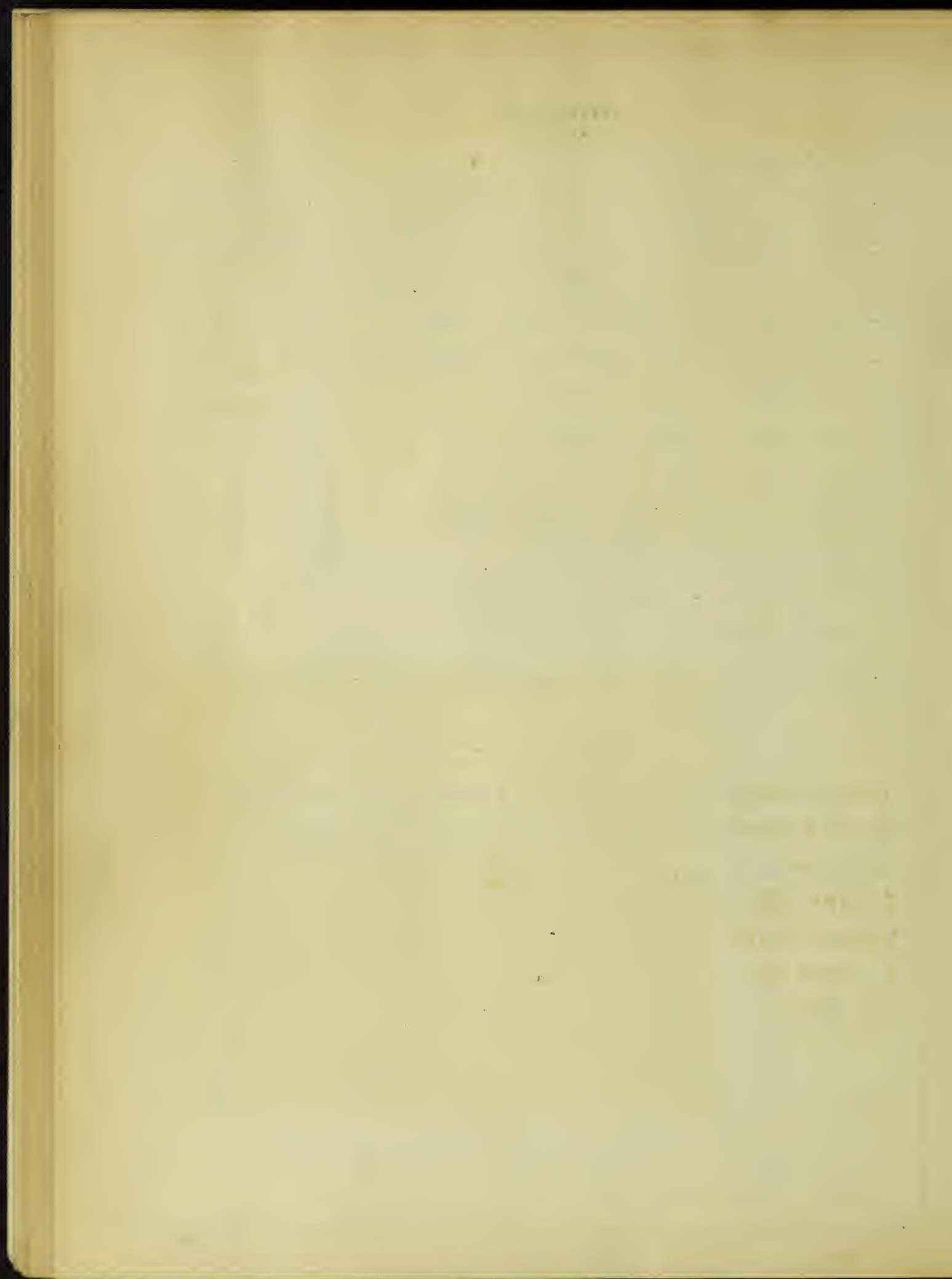


## REFERENCES

-----

1. Die Deutsche Städte
2. Plan of Chicago.- Mr. D. H. Burnham and Mr. E. H. Bennett.
3. The Park System of the District of Columbia - Senate Report  
No. 166, 57th Congress, 1st Session.
4. Municipal Improvement.- Raymond Unwin.
5. Grouping of Public Buildings,- Luther Ford.
6. Civic Art - 3 vol. - Robinson.
7. Civic Art - Thos. H. Mawson.
8. City Development.- Patrick Geddes.
9. Town Planning - Harry Inigo Triggs.
10. Town Planning - Nettlefold.
11. Paris Place - French Government.
12. Pool's Index of Magazine Articles.
14. Minneapolis & St. Paul Described in Wm. E. Curtiss'  
Articles.

Many good articles are city planning and discussion of plans of different cities, may be found in the different architectural magazines.







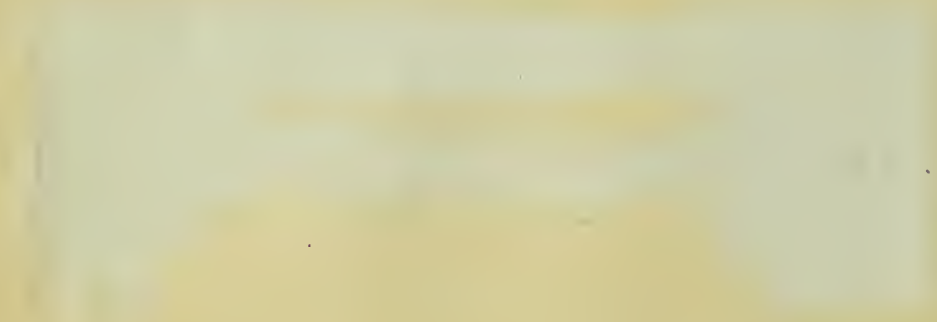
View From  
Lake St. Bridge  
Looking South  
Towards the  
Soldiers'  
Home.

View Looking  
North Towards  
the Civic  
Center Site.  
Marked by the  
"X" From the  
Lake Street  
Bridge.





*[Faint, illegible text]*



*[Faint, illegible text]*

*[Faint, illegible text]*





View along the Main Axis of the  
Civic Center (Cromwell Ave) towards North.



View along the Same Axis Looking  
South Towards the Site for the Monument.

1870

1871

1872

1873





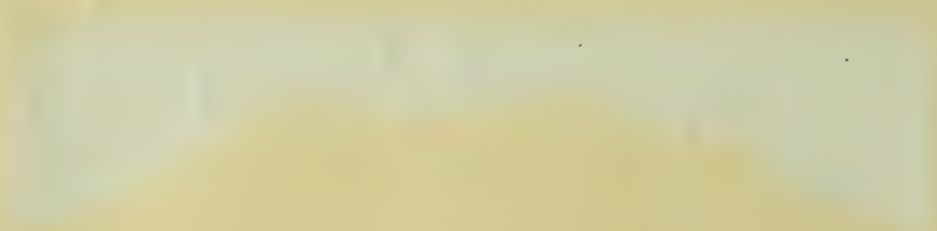
View of the Civic Center Site  
from the Milwaukee Railway Bridge.



View of the Same from across the  
River Looking Directly East.



THE UNIVERSITY OF CHICAGO  
LIBRARY



THE UNIVERSITY OF CHICAGO  
LIBRARY



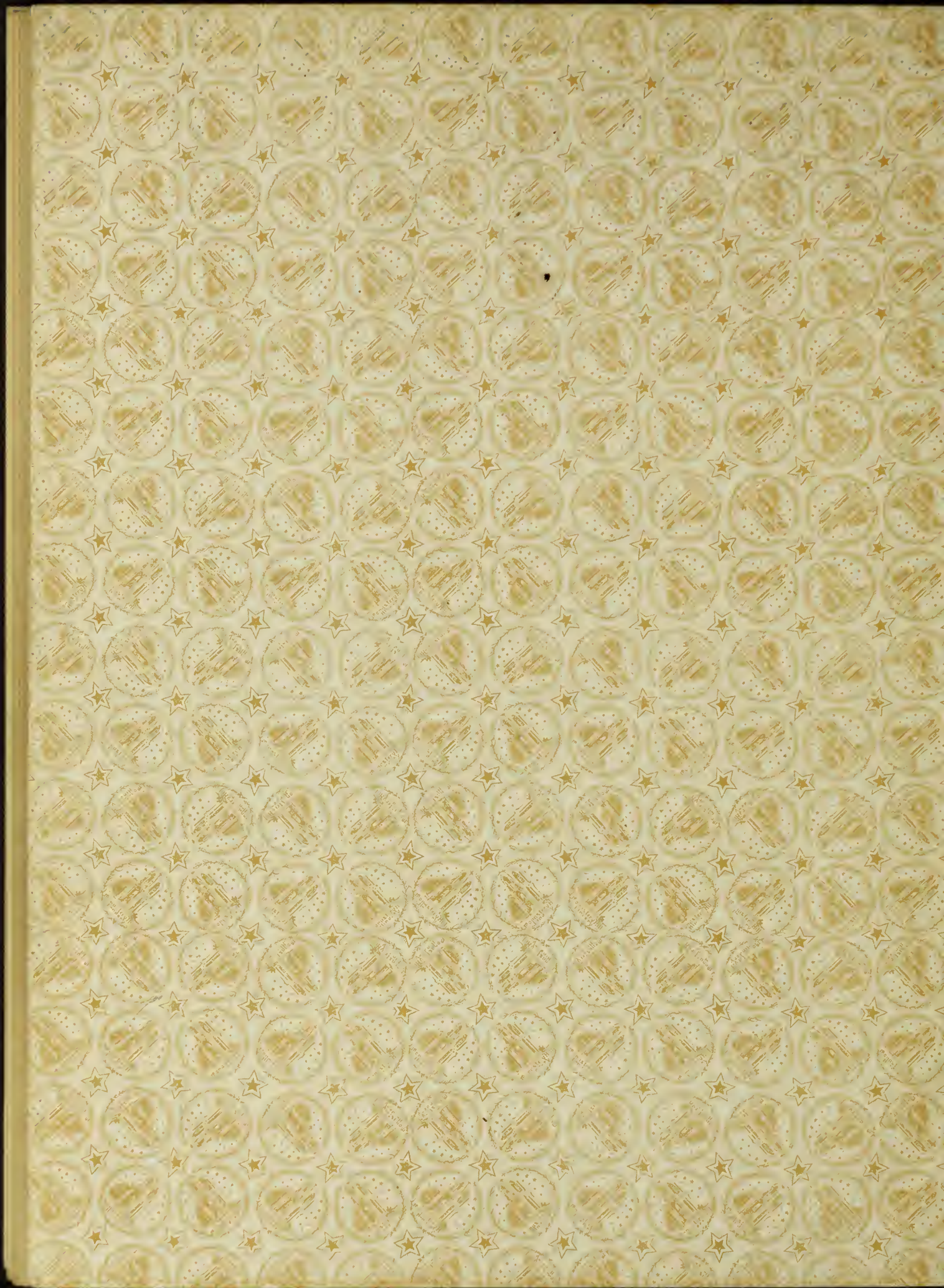


View from Pelham Ave. Towards  
The Site for the New Monument.



A closer View of the Site for  
the Monument.











UNIVERSITY OF ILLINOIS-URBANA



3 0112 079826944